

PATENT APPLICATION  
Docket No. 2705-167  
Client Seq. 4176 – CPOL 114048

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: James Allen Clark et al. Confirmation No.: 4571

Serial No. 09/864,360 Examiner: Annan Q. Shang

Filed: May 23, 2001 Group Art Unit: 2623

For: CONTENT DISCOVERY AND DIFFERENTIAL ADVERTISING IN VIDEO  
DISTRIBUTION NETWORKS

Date: February 14, 2008

**Mail Stop Appeal Brief – Patents**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**APPELLANT'S BRIEF UNDER 37 CFR §41.37**

Appeal is taken from the Examiner's Office Action mailed, finally rejecting claims 1-7, 9-12, 14-16 and 18-40 in the instant application.

This Appeal Brief is in furtherance of the Notice of Appeal filed in this case on September 27, 2007.

The fees required under §41.37(a)(2) and any required petition for extension of time for filing this Brief and fees therefor are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This Brief contains these items under the following headings, and in the order set forth below.

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### **I. REAL PARTY IN INTEREST**

**37 CFR §41.37(c)(1)(i)**

James Allen Clark, John Robert Horrobin, and Cisco Technology, Inc., are the real parties in interest.

### **II. RELATED APPEALS AND INTERFERENCES**

**37 CFR §41.37(c)(1)(ii)**

The Board's decision in the present Appeal will not directly affect, or be directly affected, or have any bearing on any other appeals or interferences known to the appellant, or to the appellant's legal representative.

### **III. STATUS OF CLAIMS**

#### **37 CFR §41.37(c)(1)(iii)**

##### **Status of All the Claims:**

1. Claims presented: 1-7, 9-12, 14-16, and 18-40
2. Claims withdrawn from consideration but not cancelled: None
3. Claims canceled: 8, 13 and 17
4. Claims pending: 1-7, 9-12, 14-16, and 18-40  
of which:
  - a. claims allowed: None
  - b. claims rejected: 1-7, 9-12, 14-16, and 18-40

All the rejected claims, namely claims 1-7, 9-12, 14-16, and 18-40 are being appealed.

The appealed claims are eligible for appeal, having been finally rejected.

### **IV. STATUS OF AMENDMENTS**

#### **37 CFR §41.37(c)(1)(iv)**

There have been no amendments filed subsequent to the Final Office Action dated April 4, 2007.

### **V. SUMMARY OF THE CLAIMED SUBJECT MATTER**

#### **37 CFR §41.37(c)(1)(v)**

The present invention relates to methods for collecting and reporting content in video streams, more particularly to methods for collecting and reporting content in video streams.

Claim 1 recites a network termination unit, comprising: a port operable to receive content signals (see, e.g., specification, p. 4, ll. 9-10, ref. 20); a demodulator operable to demodulate the content signals into demodulated content signals (see, e.g., specification, p. 4, ll. 13-15, ref. 22); a decoder operable to decode the demodulated content signals into display signals (see, e.g., specification, p. 4, ll. 16-18, ref. 24); and a module (see, e.g., specification, p. 4, ll. 9-10, ref. 26) operable to: extract content identifying data associated with a particular content signal of the content signals from that particular content signal (see, e.g., specification, p. 4, ll. 19-25), detect use patterns of a user viewing display signals on a viewing device (see,

e.g., specification, p. 4, ll. 19-25), transmit the use patterns as use pattern packets (see, e.g., specification, p. 5, ll. 10-13), detect services available information, the services available information indicating an availability of services at the network termination unit (see, e.g., specification, p. 4, ll. 19-25), and transmit the services available information in the use pattern packets (see, e.g., specification, p. 5, ll. 10-13).

Claim 9 recites a content analyzer, comprising: a port operable to receive use pattern packets from a network termination unit (see, e.g., specification, p. 6, ll. 6-7, ref. 36); a decoder operable to decode the use pattern packets into data (see, e.g., specification, p. 5, ll. 10-13, ref. 34); a processor (see, e.g., specification, p. 6, ll. 16-19, ref. 32) operable to: analyze the data to derive viewing information (see, e.g., specification, p. 6, ll. 16-19); monitor services available information, the services available information indicating an availability of services at the network termination unit (see, e.g., specification, p. 6, ll. 10-15); and characterize the network termination unit by that viewing information (see, e.g., specification, p. 6, ll. 19-20).

Claim 15 recites a method of transmitting use patterns, the method comprising: tracking use patterns of a viewing device, based upon selection of content on the viewing device (see, e.g., specification, p. 4, ll. 19-25, ref. 40); tracking services available information, the services available information indicating an availability of services for the viewing device (see, e.g., specification, p. 4, ll. 19-25); formatting data representative of the use patterns or services available information into network packets as payload data (see, e.g., specification, p. 5, ll. 18-20, ref. 44); setting a network packet header to identify the payload as use patterns, forming a use pattern packet (see, e.g., specification, p. 5, ll. 20-22, ref. 46); and transmitting the use pattern packet (see, e.g., specification, p. 5, ll. 10-13, ref. 48).

Claim 22 recites a network termination unit, comprising: a means for receiving video content signals (see, e.g., specification, p. 4, ll. 3-10, p. 8, ll. 7-14, ref. 20); a means for demodulating the video content signals into demodulated video content signals (see, e.g., specification, p. 4, ll. 3-10, and 13-15, p. 8, ll. 7-14, ref. 22); a means for decoding the demodulated video content signals into display signals (see, e.g., specification, p. 4, ll. 3-10 and 16-18, p. 8, ll. 7-14, ref. 24); a means for displaying the display signals (see, e.g., specification, p. 4, ll. 3-10, ref. 18); a means for extracting content identifying data associated

with a particular video content signal of the video content signals from that particular video content signal (see, e.g., specification, p. 4, ll. 9-10, p. 8, ll. 7-14, ref. 26); a means for detecting use patterns of a user viewing display signals on the viewing device (see, e.g., specification, p. 4, ll. 19-25, p. 8, ll. 7-14, ref. 26); a means for detecting services available information, the services available information indicating an availability of services at the network termination unit (see, e.g., specification, p. 4, ll. 19-25, p. 8, ll. 7-14); and a means for transmitting the use patterns and services available information as use pattern packets (see, e.g., specification, p. 5, ll. 10-13, p. 8, ll. 7-14, ref. 26).

Claim 26 recites a content analyzer, comprising: a means for receiving use pattern packets from a network termination unit (see, e.g., specification, p. 6, ll. 6-7, and 13-15, ref. 36); a means for decoding the use pattern packets into data (see, e.g., specification, p. 6, ll. 16-20, ref. 34); and a processing means (see, e.g., specification, p. 6, ll. 16-20, ref. 32) operable to: analyze the data to derive viewing information (see, e.g., specification, p. 6, ll. 16-19); monitor the data for services available information, the services available information indicating an availability of services at the network termination unit (see, e.g., specification, p. 6, ll. 10-15); and characterize the network termination unit by the viewing information and the services available information (see, e.g., specification, p. 6, ll. 19-20).

Claim 30 recites an article containing machine-readable code that, when executed, causes the machine to: track use patterns or services available information of a viewing device, based upon selection of video content on the viewing device; track services available information, the services available information indicating an availability of services for the viewing device; format data representative of the use patterns or services available information into network packets as payload data; set a network packet header to identify the payload as use patterns, forming a use pattern packet; and transmit the use pattern packet. (see, e.g., specification, p. 8, ll. 11-14).

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

### **37 CFR §41.37(c)(1)(vi)**

The Examiner has rejected claims 1-5, 7-11, 14, 15, 18-31 and 40 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,298,482 to Seidman et al. ("Seidman").

The Examiner has rejected claims 6, 12 and 16 under 35 U.S.C. § 103(a) as being unpatentable over Seidman, as applied to claims 1, 10 and 15 and in view of U.S. Patent No. 6,779,004 to Zintel ("Zintel").

The Examiner has rejected claims 32-39 under 35 U.S.C. § 103(a) as being unpatentable over Seidman as applied to claims 1 and 9, and in view of U.S. Patent No. 6,088,826 to Teich ("Teich").

For the convenience of the Board of Appeals, the following documents are reproduced and attached:

- Notice of Panel Decision from Pre-Appeal Brief Review mailed January 14, 2008, attached as Exhibit "1"
- Arguments in Support of Pre-Appeal Conference mailed September 27, 2007, attached as Exhibit "2"
- Final Office Action dated April 4, 2007, attached as Exhibit "3"
- Response to Non-Final Office Action, filed August 17, 2006, attached as Exhibit "4"
- Non-Final Office Action dated May 18, 2006, attached as Exhibit "5"
- Supplemental Amendment, filed May 1, 2006, attached as Exhibit "6"
- Amendment Accompanying a Request for Continued Examination, filed April 24, 2006, attached as Exhibit "7"
- Final Office Action dated January 24, 2006, attached as Exhibit "8"
- Response to Non-Final Office Action, filed November 10, 2005, attached as Exhibit "9"
- Non-Final Office Action dated August 11, 2005, attached as Exhibit "10"

**VII. ARGUMENT**  
**37 CFR §41.37(c)(1)(vii)**

**I. Grouping of Claims**

For purposes of the rejections under 35 U.S.C. § 102(e), the claims include four groups of claims. Claims 1-5, 7, 22-24, and 40 are grouped together. Claims 9-11, 14, 26-29 are grouped together. Claims 18-20, 25, and 31 are grouped together. Claims 15, 21, and 30 are grouped together.

For purposes of the rejections under 35 U.S.C. § 103(a), the claims include five groups of claims. Claims 6, 12, and 16 are grouped together. Claims 32 and 36 are grouped together. Claims 33 and 37 are grouped together. Claims 34 and 38 are grouped together. Claims 35 and 39 are grouped together.

**II. Rejections Under 35 U.S.C. § 102(e) over Seidman**

**1. Seidman in General**

“To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.’<sup>1</sup> Thus, to be recognized by persons of ordinary skill in the art, descriptive matter that is not explicit must be necessarily present in order to be inherent in the reference.

The Examiner is appears to be interpreting a selection history of a user in Seidman as services available information.<sup>2</sup> However, nowhere in Seidman is services available information described. Since services available information is not explicitly described in Seidman, it must be implicitly described to agree with the Examiner’s interpretation. However, as will be described below, the existence of a selection history does not mean that services available information must be present. Accordingly, Seidman does not teach services available information either explicitly or implicitly.

**2. Claims 1-5, 7, 22-24, and 40**

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<sup>1</sup> MPEP 2112 IV.

Insofar as claims 1-5, 7, 22-24, and 40 have been rejected under the same grounds, Applicant argues the claims as a group. The arguments below are made with respect to claim 1 on behalf of the group.

Claim 1 recites, *inter alia*:

a module operable to:

extract content identifying data associated with a particular content signal of the content signals from that particular content signal,

detect use patterns of a user viewing display signals on a viewing device,

transmit the use patterns as use pattern packets,

detect services available information, the services available information indicating an availability of services at the network termination unit, and

transmit the services available information in the use pattern packets.

That is, the module is operable to detect both use patterns of a user viewing display signals and detect services available information indicating an availability of services at the network termination unit. In addition, both use patterns and services available information are transmitted in the use pattern packets.

In Seidman, viewer response monitoring keeps track of viewer selection information.<sup>3</sup> The set top box (STB) relays the selection to the head end.<sup>4</sup> Reports containing subscriber selection history information can be used by the head end.<sup>5</sup> Thus, what is detected is a user's interaction with the STB to make a selection.

The Examiner argued that "... academic, entertainment, Internet, VOD, etc., are services available at the STB, generated in the SHR records, and transmitted to the head end..."<sup>6</sup> However, it should be noted that an SHR is a Selection History Record that records the users selections to gather statistics on viewing selections.<sup>7</sup> For example, a program that is

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<sup>2</sup> Final Office Action, April 4, 2007, p. 3 and 6.

<sup>3</sup> Seidman, col. 3, ll. 39-41.

<sup>4</sup> Seidman, col. 5, ll. 54-55.

<sup>5</sup> Seidman, col. 6, ll. 53-54.

<sup>6</sup> Final Office Action, April 4, 2007, p. 3.

<sup>7</sup> Seidman, col. 7, ll. 2-18, in particular, ll. 14-18.

selected can contain embedded data with a hyperlink offering the embedded data to the user.<sup>8</sup> When the user selects the hyperlink, a selection history record (SHR) is written to the selection history and can be eventually sent to a head end.<sup>9</sup>

Accordingly, even using the Examiner's interpretation, all that is sent is a selection of a user, not an indication of services that are available at a network termination unit. The event of a user making a selection does not mean that a service associated with the selection was available. For example, a user may select a premium channel that the user does not subscribe to. Thus, the user made a selection of a service that is not available to the user. Furthermore, services can be available that the user never selects. As a result, Seidman does not teach a module operable to detect services available information.

Furthermore, Seidman does not teach a module operable to transmit the services available information in the use pattern packets. In Seidman, the user is notified of the availability of viewing options through a program menu. Seidman, col. 6, ll. 66-67. Even if the notification implies that there is a module operable to detect services available information, such information is not transmitted in a use pattern packet. For example, a report sent to a head end by an STB may include a summary of viewing activity, or a detailed description of viewing behavior. Seidman, col. 6, ll. 44-49. Thus, viewing activity, viewing behavior, or the selections of the user, not the availability of services at a network termination unit, is transmitted to the head end.

Accordingly, Seidman does not teach each and every element of claim 1. Accordingly, claim 1 and similarly claims 2-5, 7, 22-24, 30, and 40 are not anticipated by Seidman.

### 3. Claims 9-11, 14, and 26-29

Insofar as claims 9-11, 14, and 26-29 have been rejected under the same grounds, Applicant argues the claims as a group. The arguments below are made with respect to claim 9 on behalf of the group.

Claim 9 recites a content analyzer comprising, *inter alia*:

a port operable to receive use pattern packets from a network termination unit; and  
a processor operable to:

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<sup>8</sup> Seidman, col. 8, ll. 17-24.

monitor services available information, the services available information indicating an availability of services at the network termination unit.

That is, the content analyzer monitors services available information indicating an availability of services at a network termination unit from which the content analyzer received use pattern packets.

As described above with respect to claim 1, services available information is not detected at a network termination unit in Seidman. Seidman describes even less with respect to a head end, which was apparently cited by the Examiner as a content analyzer. Thus, Seidman cannot teach that services available information is monitored.

In addition, the rejection of claim 9 was, in its entirety:

As to claim 9, the claimed “a content analyzer, comprising...” is composed of the same structural elements of a previously rejected claim 1.<sup>10</sup>

Thus, the Examiner appears to be rejecting the content analyzer of claim 9 by arguing that the claims have the same structural elements of claim 1.

However, “a functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used.” MPEP 2173.05(g). Thus, even if claim 1 has the same structural elements as claim 9, functional limitations of the claims must be evaluated and considered.

For example, the elements of claims 1 and 9 are different through functional limitations. Claim 1 includes a module operable to transmit the use patterns as use pattern packets. In contrast, claim 9 includes a processor operable to analyze the data to derive viewing information, where the data was decoded from a use pattern packet. Thus, even if the module of claim 1 and the processor of claim 9 are interpreted as the same structural element, each has distinct functional limitations that are lacking in the other. Therefore, it is improper to reject claim 9 based solely on the structural elements of claim 1.

Accordingly, not only does Seidman not teach each and every element of claim 9, but the Examiner has improperly failed to evaluate each and every element of the claim.

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<sup>9</sup> Seidman, col. 8, ll. 24-30.

Accordingly, claim 9 and similarly claims 10-11, 14, and 26-29 are not anticipated by Seidman.

4. Claims 15, 21, and 30

Insofar as claims 15, 21, and 30 have been rejected under the same grounds, Applicant argues the claims as a group. The arguments below are made with respect to claim 15 on behalf of the group.

Claim 15 recites a method of transmitting use patterns comprising, *inter alia*:

tracking services available information, the services available information indicating an availability of services for the viewing device;

formatting data representative of the use patterns or services available information into network packets as payload data; and

setting a network packet header to identify the payload as use patterns, forming a use pattern packet.

As described above with respect to claim 1, services available information is not detected at a network termination unit. Accordingly, Seidman cannot teach that services available information is tracked.

Furthermore, the rejection of method claim 15 was, in its entirety, “As to claim 15, the claimed “a method of transmitting use patterns...” is composed of the same structural elements of a previously rejected claim 1.”<sup>10</sup>

Even assuming for the sake of argument that the Examiner meant to say something like the claimed method performs the same operations as the device of previously rejected claim 1, the Examiner has neglected to address each and every element of claim 15.

As described above, claim 15 includes setting a network packet header to identify the payload of a network packet as use patterns, forming a use pattern packet. Even if Seidman teaches sending viewer selections that are interpreted as use patterns, no mention is made of a setting of a network packet header to identify the payload as use patterns.

Thus, in order for Seidman to teach setting a header of a network packet, it must be inherent in Seidman. As described above, to be inherent, the setting of a network packet

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<sup>10</sup> Final Office Action, April 4, 2007, p. 7.

header must be necessarily present. However, it is not necessary to the teachings in Seidman that the network packet header identifies the payload as use patterns. For example, although also not taught in Seidman, the payload itself may include identification that the payload includes use patterns. Thus, the setting of the network packet header is not taught by Seidman.

Not only does Seidman not teach each and every element of claim 15, but the Examiner has improperly failed to evaluate each and every element of the claim. Accordingly, claim 15 and similarly claims 21 and 30 are not anticipated by Seidman.

#### 5. Claims 18-20, 25, and 31

Insofar as claims 18-20, 25, and 31 have been rejected under the same grounds, Applicant argues the claims as a group. The arguments below are made with respect to claim 18 on behalf of the group.

Similar to claims 1 and 15 described above, Seidman does not teach that services available information is tracked, nor that a network packet header is set to identify the payload of a network packet as use patterns.

In addition, claim 18 includes tracking video content delivery. Although Seidman describes tracking a user's viewing history, viewing history as used in Seidman and video content delivery are distinct. As described above, tracking of viewing history in Seidman is described only by monitoring a user's selections. Thus, what is tracked is a user's interaction with the STB to make a selection.

Nothing is mentioned concerning the tracking of the delivery of video content to the user. Although content is delivered to a user in Seidman, and the content may be customized using a user's viewing history<sup>12</sup>, tracking that a user made a selection does not mean that the delivery of the content was tracked.

Furthermore, that a user selected video content does not even mean that the video content was delivered. For example, a user may select video content, then the viewing device may receive the video content. Alternatively, the video content may be already delivered to and stored on the viewing device before the user selects it.

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<sup>11</sup> Final Office Action, April 4, 2007, p. 7

Seidman does not teach each and every element of claim 18. Accordingly, claim 18 and similarly claims 19-20, 25, and 31 are allowable over Seidman.

### **III. Rejections of Claims 6, 12, and 16 Under 35 U.S.C. § 103(a) over Seidman and Zintel**

Insofar as claims 6, 12, and 16 have been rejected under the same grounds, Applicant argues the claims as a group. The arguments below are made with respect to claim 6 on behalf of the group.

Claims 6 recites that the use pattern packets are identified as such using a content discovery protocol that uniquely identifies use pattern packets from among other packets. The Examiner noted that Seidman did not teach that the use pattern packets are identified as such using a content discovery protocol.<sup>13</sup>

Zintel does teach a Simple Service Discovery Protocol (SSDP), however, the SSDP provides a peer discovery mechanism for the universal plug and play (UPnP) devices.<sup>14</sup> The discovery process returns only basic information needed to connect with an embedded computing device.<sup>15</sup> Nothing is mentioned for uniquely identifying use pattern packets from among other packets.

Furthermore, the portions of the reference cited by the Examiner do not even mention uniquely identifying packets.<sup>16</sup> The cited portion of col. 4 generally describes a universal plug and play network architecture. The cited portion of col. 5 generally describes benefits of the universal plug and play network architecture. The cited portion of col. 7 describes examples of devices that can be a universal plug and play device.

At best, in the cited portion of col. 46, Zintel describes a multicast packet containing an identifier of a desired service.<sup>17</sup> Thus, what is identified is not the packet, but rather a service desired by the client sending the packet.

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<sup>12</sup> Seidman, col. 6, ll. 2-8.

<sup>13</sup> Final Office Action, April 4, 2007, p. 8.

<sup>14</sup> Zintel, col. 46, ll. 33-46.

<sup>15</sup> Zintel, col. 47, ll. 16-17.

<sup>16</sup> Final Office Action, April 4, 2007, p. 4 and 8.

<sup>17</sup> Zintel, col. 46, ll. 42-44.

Moreover, the Examiner has not provided a proper reason why Zintel would be used with Seidman to show that claim 6 is obvious. "The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious . . . there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."<sup>18</sup>

The reason provided by the Examiner was "to enable the client or the service provider to automatically find controlled devices and services."<sup>19</sup> However, this is not a reason to modify both Seidman and Zintel to identify use pattern packets as such using a content discovery protocol that uniquely identifies use pattern packets from among other packets as recited in claim 6.

As a result, the combination of Seidman and Zintel does not render obvious claim 6, and similarly claims 12, and 16.

#### **IV. Rejections Under 35 U.S.C. § 103(a) over Seidman and Teich**

##### **1. Seidman and Teich in General**

"The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious . . . there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."<sup>20</sup>

The Examiner argued that "it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Teich into the system of Seidman in order to process error free packets or valid packets and provide an efficiency system and furthermore to notify the source of packets or contents which have been received to enable the source or service provider to acknowledge receipt of its services."<sup>21</sup> However, in Teich, there is no acknowledgement sent back to a source of packets to acknowledge its receipt. For example, the only reason

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<sup>18</sup> MPEP 2141 III.

<sup>19</sup> Final Office Action, April 4, 2007, p. 9

<sup>20</sup> MPEP 2141 III.

<sup>21</sup> Final Office Action, April 4, 2007, p. 9-10.

given in Teich to reply to a source of packets is to request retransmission.<sup>22</sup> Otherwise, no reply is given.

Furthermore, in contrast to the Examiner's reason to combine the references, Teich explicitly teaches against using the disclosed error checking for multimedia data. Teich gives examples of error tolerant, invulnerable data as digital audio data and video data.<sup>23</sup> For invulnerable data, a flag is set to a second state.<sup>24</sup> As can be seen in FIG. 1 of Teich, if the flag is in the second state in 112, processing continues in 114 without the error detecting in 118 or correcting in 122. In other words, for multimedia data, such as audio or video data, the corresponding packets are not checked for errors.

The selection of particular packets that are not checked for errors is the focus of the improvement in Teich. Teich recognizes that checking each data frame is a time consuming and network congestion-inducing task.<sup>25</sup> By only performing the error checking on vulnerable frames, transmission of data is sped up, less congestion occurs, and robust (or invulnerable) frames are allowed to have errors.<sup>26</sup> One skilled in the art would not combine the digital multimedia system of Seidman with the error correction for multimedia data (rather, the lack of error correction for multimedia data) in Teich since Teich explicitly teaches against it.

## 2. Claims 32 and 36

Insofar as claims 32 and 36 have been rejected under the same grounds, Applicant argues the claims as a group. The arguments below are made with respect to claim 32 on behalf of the group.

Claim 32 recites a processor operable to track a quality of service of services provided to the network termination unit. The Examiner noted that Seidman does not teach tracking a quality of service of services provided to a network termination unit.<sup>27</sup>

Teich does teach error correction.<sup>28</sup> However, there is no indication that the presence

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<sup>22</sup> Teich, FIG. 1.

<sup>23</sup> Teich, col. 3, ll. 28-34.

<sup>24</sup> Teich, col. 3, ll. 37-40.

<sup>25</sup> Teich, col. 2, ll. 20-22.

<sup>26</sup> Teich, col. 4, ll. 6-14.

<sup>27</sup> Final Office Action, April 4, 2007, p. 9.

<sup>28</sup> Teich, Abstract.

and/or correction of an error is tracked. At best, Teich does teach communicating from a destination to a source system to switch the rigorouslyness of error detection and correction.<sup>29</sup> However, even if this is interpreted as a quality of service, there is no teaching or suggestion to track such a communication or switch in error correction.

In other words, Teich may teach an operation that can improve a quality of service, such as error correction. However, Teich does not teach the tracking of that operation. As a result, the combination of Seidman and Teich does not render obvious claim 32 and similarly claim 36.

### 3. Claims 33 and 37

Insofar as claims 33 and 37 have been rejected under the same grounds, Applicant argues the claims as a group. The arguments below are made with respect to claim 33 on behalf of the group.

Claim 33 recites that the processor is further operable to track reception of content signals by the network termination unit.

The Examiner argued that Seidman taught tracking of reception of content signals by the network termination unit.<sup>30</sup> As described above, the only tracking that Seidman describes is the selection of a user. That a user selected a content signal is independent of whether it was received. For example, the user can select a content signal and then it is received, as is the case with the embedded data described above. In another example, a user can select prohibited content so the user does not receive the content. In yet another example, the user can select content that is already stored on the network termination unit, thus it was received before the user selected the content. Thus, selection of a content signal does not suggest tracking of reception of the content signal.

The Examiner also argued that Teich taught tracking of reception of content signals by the network termination unit.<sup>31</sup> As described above, Teich focuses on error correction, not tracking of the reception of content signal. However, even if the error correction in Teich is interpreted as the reception of content signals, that error correction is not tracked. Once the

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<sup>29</sup> Teich, col. 5, ll. 41-44.

<sup>30</sup> Final Office Action, April 4, 2007, p. 9.

<sup>31</sup> Final Office Action, April 4, 2007, p. 9.

error is corrected or not corrected, processing continues without tracking the outcome.<sup>32</sup>

Accordingly, even if Teich is combined with Seidman, at best it suggests only error correction of content signals, not the tracking of the reception of the content signals. As a result, the combination of Seidman and Teich does not render obvious claim 33 and similarly claim 37.

#### 4. Claims 34 and 38

Insofar as claims 34 and 38 have been rejected under the same grounds, Applicant argues the claims as a group. The arguments below are made with respect to claim 34 on behalf of the group.

Claim 34 recites that the processor is further operable to determine if data of a particular service that should have been received by the network termination unit at a point in time was received by the network termination unit.

The Examiner argued that Seidman teaches “determining if data of a particular service that should have been received by the NTU at a point in time was received by the NTU.”<sup>33</sup> However, the Examiner provided no citation to Seidman to illustrate this element. The Applicant can find no mention in Seidman of a characterization of data that should have been received by the network termination unit, let alone a determination that it was received.

The Examiner also argued that Teich teaches “determining if data of a particular service that should have been received by the NTU at a point in time was received by the NTU.”<sup>34</sup> However, Teich operates on packets or frames individually. Teich, col. 4, ll. 17-22, and FIG. 1. It does not disclose any relationship between packets or frames. In addition, Teich does not disclose any relationship of packets or frames that should have been received by a point in time. Merely checking a received packet or frame for errors, optionally correcting errors, and optionally requesting retransmission of an errored packet or frame does not teach or suggest any time relationship to other packets or frames.

As a result, there is no monitoring, tracking, or otherwise determining if data that should have been received by a point in time was received suggested by Seidman and Teich.

---

<sup>32</sup> Teich, FIGS. 1 and 2.

<sup>33</sup> Final Office Action, April 4, 2007, p. 9.

<sup>34</sup> Final Office Action, April 4, 2007, p. 9.

Therefore, the combination of Seidman and Teich does not render obvious claim 34 and similarly claim 38.

5. Claims 35 and 39

Insofar as claims 35 and 39 have been rejected under the same grounds, Applicant argues the claims as a group. The arguments below are made with respect to claim 35 on behalf of the group.

Claim 35 recites that the processor is further operable to verify a complete delivery of an advertisement to the network termination unit. As described above, there is no relationship between packets and frames suggested in Seidman and Teich. Since an advertisement will likely include more than one frame or packet, the lack of a relationship shows that the combination of Teich and Seidman does not teach or suggest verifying a complete delivery of an advertisement.

However, even if an advertisement is included in only one packet or frame, combination of Teich and Seidman does not suggest verifying that it is complete. To verify that the advertisement is complete includes some analysis of the content of a packet or frame beyond mere error correction. For example, consider a packet with a complete advertisement that is received and has any errors corrected as described in Teich. For contrast, consider a packet with an incomplete advertisement that is received and has any errors corrected as described in Teich. The result is two packets with corrected errors (if any), not a verification that one packet was a complete advertisement, and the other packet was an incomplete advertisement. The completeness of an advertisement relies on the content of the packet, not the errored or error-free status of the packet.

There is no suggestion of any indication that a single packet, a single frame, or a combination of packets or frames was a complete advertisement in order to verify that it was. As a result, the combination of Seidman and Teich does not render obvious claim 35 and similarly claim 39.

**IV. Argument Summary**

In the rejections under 35 U.S.C. § 102(e), the Examiner has failed to show where Seidman teaches, either expressly or inherently, each and every element of the rejected claims.

In the rejections under 35 U.S.C. § 103(a) over Seidman and Zintel, the Examiner has not provided a reason supported by rational underpinnings that Seidman and Zintel render the claims obvious nor has the Examiner shown that Seidman and Zintel teaches each and every element of the claims.

In the rejections under 35 U.S.C. § 103(a) over Seidman and Teich, the Examiner has not shown that Seidman and Zintel teaches each and every element of the claims.

### **CONCLUSION**

For the foregoing reasons, Applicant requests that the Board reverse the Examiner's 35 U.S.C. § 102(e) and 35 U.S.C. § 103(a) rejections of Applicant's claims.

Respectfully submitted,  
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**VIII. CLAIMS APPENDIX**  
**37 CFR §41.37(c)(1)(viii)**

The text of the claims on appeal (claims 1-7, 9-12, 14-16, and 18-40) is:

1. (Previously presented) A network termination unit, comprising:
  - a port operable to receive content signals;
  - a demodulator operable to demodulate the content signals into demodulated content signals;
  - a decoder operable to decode the demodulated content signals into display signals; and
  - a module operable to:
    - extract content identifying data associated with a particular content signal of the content signals from that particular content signal,
    - detect use patterns of a user viewing display signals on a viewing device,
    - transmit the use patterns as use pattern packets,
    - detect services available information, the services available information indicating an availability of services at the network termination unit, and
    - transmit the services available information in the use pattern packets.
2. (Original) The network termination unit of claim 1, wherein the network termination unit further comprises a set-top box.
3. (Original) The network termination unit of claim 1, wherein the network termination unit further comprises a cable modem.
4. (Original) The network termination unit of claim 1, wherein the viewing device further comprises a television.
5. (Original) The network termination unit of claim 1, wherein the viewing device further comprises a computing device.

6. (Previously presented) The network termination unit of claim 1, wherein the use pattern packets are identified as such using a content discovery protocol that uniquely identifies use pattern packets from among other packets.

7. (Original) The network termination unit of claim 1, wherein the decoder is also operable to decode the demodulated content signals into command and control signals.

8. (Canceled)

9. (Previously presented) A content analyzer, comprising:  
a port operable to receive use pattern packets from a network termination unit;  
a decoder operable to decode the use pattern packets into data;  
a processor operable to:  
analyze the data to derive viewing information;  
monitor services available information, the services available information indicating an availability of services at the network termination unit; and  
characterize the network termination unit by that viewing information.

10. (Original) The content analyzer of claim 9, wherein the content analyzer resides at the distribution hub.

11. (Original) The content analyzer of claim 9, wherein the content analyzer resides at the head end.

12. (Previously presented) The content analyzer of claim 9, wherein the decoder decodes the use pattern packets in accordance with a content discovery protocol that uniquely identifies use pattern packets from among other packets.

13. (Canceled)

APPELLANT'S BRIEF  
2705-167

Page 21

MJM Docket No.

SER. NO. / 09/864,360

14. (Original) The content analyzer of claim 9, wherein the processor is operable to use the characterization of the network termination unit to target video content to that network termination unit.

15. (Previously presented) A method of transmitting use patterns, the method comprising:  
tracking use patterns of a viewing device, based upon selection of content on the viewing device;  
tracking services available information, the services available information indicating an availability of services for the viewing device;  
formatting data representative of the use patterns or services available information into network packets as payload data;  
setting a network packet header to identify the payload as use patterns, forming a use pattern packet; and  
transmitting the use pattern packet.

16. (Previously presented) The method of claim 15, wherein setting a network packet header is done in accordance with a content discovery protocol that uniquely identifies use pattern packets from among other packets.

17. (Canceled)

18. (Previously presented) The method of claim 15, wherein the method further comprises tracking video content delivery to the viewing device.

19. (Original) The method of claim 18, wherein the video content further comprises programs.

20. (Original) The method of claim 18, wherein the video content further comprises advertising.

21. (Original) The method of claim 15, wherein the use patterns or services available information of a viewing device further comprises use patterns or services available information of service extension offered on the viewing device.

22. (Previously presented) A network termination unit, comprising:  
a means for receiving video content signals;  
a means for demodulating the video content signals into demodulated video content signals;  
a means for decoding the demodulated video content signals into display signals;  
a means for displaying the display signals;  
a means for extracting content identifying data associated with a particular video content signal of the video content signals from that particular video content signal, and  
a means for detecting use patterns of a user viewing display signals on the viewing device;  
a means for detecting services available information, the services available information indicating an availability of services at the network termination unit; and  
a means for transmitting the use patterns and services available information as use pattern packets.

23. (Original) The network termination unit of claim 22, wherein the network termination unit further comprises a cable set-top box.

24. (Original) The network termination unit of claim 22, wherein the network termination unit further comprises a cable modem.

25. (Previously presented) The network termination unit of claim 22, wherein the means for detecting services available information is operable to detect delivery of video content.

26. (Previously presented) A content analyzer, comprising:  
a means for receiving use pattern packets from a network termination unit;  
a means for decoding the use pattern packets into data; and  
a processing means operable to:  
analyze the data to derive viewing information;  
monitor the data for services available information, the services available information indicating an availability of services at the network termination unit; and  
characterize the network termination unit by the viewing information and the services available information.

27. (Original) The content analyzer of claim 26, wherein the content analyzer resides at a distribution hub.

28. (Original) The content analyzer of claim 26, wherein the content analyzer resides at a head end.

29. (Original) The content analyzer of claim 26, wherein the processor is further operable to target the network termination unit by its characterization.

30. (Previously presented) An article containing machine-readable code that, when executed, causes the machine to:  
track use patterns or services available information of a viewing device, based upon selection of video content on the viewing device;  
track services available information, the services available information indicating an availability of services for the viewing device;  
format data representative of the use patterns or services available information into network packets as payload data;  
set a network packet header to identify the payload as use patterns, forming a use pattern packet; and

transmit the use pattern packet.

31. (Original) The article of claim 30, wherein the article contains machine-readable code that, when executed, further causes the machine to monitor status of delivery of video content.

32. (Previously presented) The content analyzer of claim 9, wherein the processor is further operable to track a quality of service of services provided to the network termination unit.

33. (Previously presented) The content analyzer of claim 32, wherein the processor is further operable to track reception of content signals by the network termination unit.

34. (Previously presented) The content analyzer of claim 32, wherein the processor is further operable to determine if data of a particular service that should have been received by the network termination unit at a point in time was received by the network termination unit.

35. (Previously presented) The content analyzer of claim 32, wherein the processor is further operable to verify a complete delivery of an advertisement to the network termination unit.

36. (Previously presented) The network termination unit of claim 1, further comprising a module operable to monitor a quality of service of the content signals.

37. (Previously presented) The network termination unit of claim 36, wherein the module operable to monitor the quality of service is further operable to track reception of the content signals by the network termination unit.

38. (Previously presented) The network termination unit of claim 36, wherein the module operable to monitor the quality of service is further operable to determine if data of a monitored content signal that should have been received at a point in time was received.

39. (Previously presented) The network termination unit of claim 36, wherein the module operable to monitor the quality of service is further operable to verify a complete delivery of an advertisement.

40. (Previously presented) The network termination unit of claim 1, wherein the content identifying data is a transport stream identifier.

**IX. EVIDENCE APPENDIX**

**37 CFR §41.37(c)(1)(ix)**

**NONE**

**X. RELATED PROCEEDINGS APPENDIX**

**37 CFR §41.37(c)(1)(x)**

NONE

<b>Application Number</b> 	Application/Control No.	Applicant(s)/Patent under Reexamination
	09/864,360	CLARK ET AL. Art Unit 2623
Annan Q. Shang		
<b>Document Code - AP.PRE.DEC</b>		

## Notice of Panel Decision from Pre-Appeal Brief Review



This is in response to the Pre-Appeal Brief Request for Review filed 9/27/07.

1.  **Improper Request** – The Request is improper and a conference will not be held for the following reason(s):

- The Notice of Appeal has not been filed concurrent with the Pre-Appeal Brief Request.
- The request does not include reasons why a review is appropriate.
- A proposed amendment is included with the Pre-Appeal Brief request.
- Other: \_\_\_\_\_

The time period for filing a response continues to run from the receipt date of the Notice of Appeal or from the mail date of the last Office communication, if no Notice of Appeal has been received.

2.  **Proceed to Board of Patent Appeals and Interferences** – A Pre-Appeal Brief conference has been held. The application remains under appeal because there is at least one actual issue for appeal. Applicant is required to submit an appeal brief in accordance with 37 CFR 41.37. The time period for filing an appeal brief will be reset to be one month from mailing this decision, or the balance of the two-month time period running from the receipt of the notice of appeal, whichever is greater. Further, the time period for filing of the appeal brief is extendible under 37 CFR 1.136 based upon the mail date of this decision or the receipt date of the notice of appeal, as applicable.

The panel has determined the status of the claim(s) is as follows:

Claims(s) allowed: \_\_\_\_\_

Claims(s) objected to: \_\_\_\_\_

Claims(s) rejected: 1-7;9-12;14-16 and 18-40.

Claims(s) withdrawn from consideration: \_\_\_\_\_

3.  **Allowable application** – A conference has been held. The rejection is withdrawn and a Notice of Allowance will be mailed. Prosecution on the merits remains closed. No further action is required by applicant at this time.

4.  **Reopen Prosecution** – A conference has been held. The rejection is withdrawn and a new Office action will be mailed. No further action is required by applicant at this time.

All participants:

(1) Reinhard J. Eisenzopf *RE*  
 (2) Chris Kelley *CK*

(3) Annan Q. Shang *AS*

(4) \_\_\_\_\_

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,360	05/23/2001	James Allen Clark	2705-167	4571
20575	7590	01/14/2008	EXAMINER	
MARGER JOHNSON & MCCOLLOM, P.C.			SHANG, ANNAN Q	
210 SW MORRISON STREET, SUITE 400			ART UNIT	PAPER NUMBER
PORTLAND, OR 97204			2623	
MAIL DATE		DELIVERY MODE		
01/14/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PATENT APPLICATION  
Attorney Do. No. 2705-167  
Client Seq. 4176 - CPOL 114048

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: James Allen Clark et al.

Confirmation No. 4571

Serial No.: 09/864,360 Examiner: Annan Q. Shang

Filed: May 23, 2001 Group Art Unit:2623

For: CONTENT DISCOVERY AND DIFFERENTIAL ADVERTISING IN VIDEO  
DISTRIBUTION NETWORKS

Date: September 27, 2007

**Mail Stop AF**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**ARGUMENTS IN SUPPORT OF PRE-APPEAL BRIEF CONFERENCE**

This request is being filed with a Notice of Appeal.

**Status of the Claims**

Claims 1-7, 9-12, 14-16, and 18-40 are pending.

Claims 1-7, 9-12, 14-16, and 18-40 are rejected.

*Seidman does not teach the transmission of services available information either  
expressly or inherently.*

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *MPEP 2131*

*Anticipation.* "The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. ... To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by

persons of ordinary skill." *MPEP 2112 Requirements of Rejection Based on Inherency; Burden of Proof.*

Thus, for a rejection under 35 U.S.C. §102, each and every element must be either expressly taught or if not, must be necessarily present in the reference. That an element *may* be present is insufficient. As described below, the following elements of the claims 1, 9, 15, 18, 22, 25, 26, 30, and 31 are not expressly taught or necessarily present in Seidman.

Claim 1 includes a module operable to "detect services available information, the services available information indicating an availability of services at the network termination unit, and transmit the services available information in the use pattern packets." Thus, information in the availability of services at the NTU is transmitted. Claim 22 includes similar elements. Claim 15 includes similar tracking of service available information.

The Examiner is apparently not making a distinction between user selections and services available information indicating the availability of services. Seidman expressly teaches transmission of selection history. However, it is not necessary that a selection of a user inherently includes services available information. For example, a user may select a service that is available and also select a service that is not available. That the user has made a selection does not inherently indicate the selected service is available or unavailable. See the Amendment dated August 17, 2006, p. 9, line 9 to p. 10, line 13. Thus, the transmission of user selections and other history in Seidman does not teach each and every element of claims 1, 15, and 22.

Claim 26 includes a content analyzer with "a means for receiving use pattern packets from a network termination unit; and a processor to monitor the data for services available information, the services available information indicating an availability of services at the network termination unit." Thus, claim 26 describes a content analyzer that receives the services available information from the NTU. As described above, Seidman does not teach the tracking or other collection of services available information at an NTU, let along the transmission of it. Accordingly, it does not monitoring the data from an NTU for services available information.

Claim 18 includes tracking video content delivery. Claims 25 and 31 include similar elements. Although Seidman describes tracking a user's viewing history, viewing history as used in Seidman and video content delivery are distinct. Tracking of viewing history in Seidman is described only by monitoring a user's selections. Thus, what is tracked is a user's interaction with the STB to make a selection. Nothing is mentioned concerning the delivery of

video content to a viewing device. Although content is delivered to an NTU in Seidman, and the content may be customized using a user's viewing history, tracking that a user made a selection does not mean that the delivery of the content was tracked. It is not necessary to track delivery of video content in order to generate a user's viewing history. As a result, Seidman does not teach each and every element of claims 18, 25, and 31. See Amendment dated August 17, 2006, p. 13, line 9 to p. 14, line 2.

Furthermore, claim 18 specifically recites tracking video content delivery to the viewing device. The selection of a user has no bearing on the delivery of the video content to the viewing device. That a user selected video content does not even mean that the video content was delivered. For example, a user may select video content, and then the viewing device may receive the video content. Alternatively, the video content may be already delivered to and stored on the viewing device before the user selects it. Thus, the selection by a user does not necessarily teach tracking of video content to a viewing device. As a result, Seidman does not teach each and every element of claim 18.

*No suggestion or motivation to combine Seidman and Teich.*

The Examiner has failed to make a prima facie case of obviousness regarding claims 32-39. "To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations."

*MPEP 2143 Basic Requirements of a Prima Facie Case of Obviousness.*

The Examiner argued that "it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Teich into the system of Seidman in order to process error free packets or valid packets and provide an efficiency system and furthermore to notify the source of packets or contents which have been received to enable the source or service provide to acknowledge receipt of its services." Office Action dated April 4, 2007, p. 9-10.

In contrast to the Examiner's reason to combine the references, Teich explicitly teaches against using the disclosed error checking for multimedia data. Teich gives examples of error tolerant, invulnerable data as digital audio data and video data. Teich, col. 3, ll. 28-34. For

invulnerable data, a flag is set to a second state. Teich, col. 3, ll. 37-40. As can be seen in FIG. 1 of Teich, if the flag is in the second state in 112, processing continues in 114 without the error detecting in 118 or correcting in 122. In other words, for multimedia data, such as audio or video data, the corresponding packets are not checked for errors.

The selection of particular packets that are not checked for errors is the focus of the improvement in Teich. Teich recognizes that checking each data frame is a time consuming and network congestion-inducing task. Teich, col. 2, ll. 20-22. By only performing the error checking on vulnerable frames, transmission of data is sped up, less congestion occurs, and robust (or invulnerable) frames are allowed to have errors. Teich, col. 4, ll. 6-14.

One skilled in the art would not combine the digital multimedia system of Seidman with the error correction for multimedia data in Teich since Teich explicitly teaches against it.

*No teaching or suggestion of all claim limitations*

Even if Seidman and Teich are combined, the combination of Seidman and Teich does not teach or suggest all of the limitations of claims 34-35, and 38-39.

Claim 38 includes a module operable to determine if data of a monitored content signal that should have been received at a point in time was received. Claim 34 includes a similar element within a content analyzer. Teich operates on packets or frames individually. Teich, col. 4, ll. 17-22, and FIG. 1. It does not disclose any relationship between packets or frames. In addition, Seidman does not disclose any relationship of packets that should have been received by a point in time. Merely checking a received packet for errors, optionally correcting errors, and optionally requesting retransmission of an errored packet does not teach or suggest any time relationship to other packets. As a result, there is no monitoring, tracking, or otherwise determining if data that should have been received was received. Therefore, the combination of Seidman and Teich does not teach or suggest each and every element of claims 34 or 38.

Claim 39 includes a module operable to verify a complete delivery of an advertisement. Claim 35 includes a similar element implemented in a content analyzer. As described above, there is no relationship between packets and frames suggested in Seidman and Teich. Since an advertisement will likely include more than one frame or packet, the lack of a relationship shows that the combination of Teich and Seidman does not teach or suggest verifying a complete delivery of an advertisement.

However, even if an advertisement includes only one packet or frame, combination of Teich and Seidman does not suggest verifying that it is complete. Even if a single packet or single frame is checked for errors, that checking for errors is not suggestion to verify that the single packet or the single frame was a complete advertisement. Such a determination deals with the content of the packet or frame. Error checking does not deal with the content of the packet or frame. In contrast, error checking deals with the integrity of the data forming the content. As a result, the combination of Teich and Seidman does not teach or suggest each and every element of claims 35 and 39.

With respect to claims 32-39 the Examiner failed to make a prima facie case for obviousness either by failing to provide a reason to combine Seidman and Teich or by failing to teach or suggest each and every element.

#### **Conclusion**

The Applicant also asserts all arguments made previously, whether or not explicitly discussed herein, to preserve the right to assert these arguments in the Appeal Brief.

**Customer No. 20575**

Respectfully submitted,

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,360	05/23/2001	James Allen Clark	2705-167	4571
20575	7590	04/04/2007		
MARGER JOHNSON & MCCOLLOM, P.C. 210 SW MORRISON STREET, SUITE 400 PORTLAND, OR 97204			EXAMINER SHANG, ANNAN Q	
			ART UNIT 2623	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE 3 MONTHS		MAIL DATE 04/04/2007	DELIVERY MODE PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/864,360	CLARK ET AL.	
	Examiner Annan Q. Shang	Art Unit 2623	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

## ***Office Action Summary***

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

Extensions of time may be available under the provisions of 37 CFR 1.136(e). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.  
If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  
Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1)  Responsivé to communication(s) filed on 17 August 2006.  
2a)  This action is FINAL. 2b)  This action is non-final.  
3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### **Disposition of Claims**

4)  Claim(s) **1-7,9-12,14-16 and 18-40** is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) **1-7,9-12,14-16 and 18-40** is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All    b)  Some \* c)  None of:

1.  Certified copies of the priority documents have been received.

2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_.

3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

Notice of References Cited (PTO-892)  
 Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/M&I Date \_\_\_\_\_  
 Interview Summary (PTO-413)  
Paper No(s)/M&I Date \_\_\_\_\_  
 Notice of Informal Patent Application  
 Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments/amendment with respect to claims 1-7 and 22-30 have been considered but are moot in view of the new ground(s) of rejection. The amendment to the independent claims 1, 22 and 26 necessitated the new ground(s) of rejection discussed below.

With respect to claims 9-11, 14,15, 18-31 and 40 rejected under 35 U.S.C. 102(e) as being anticipated by **Seidman et al (6,298,482)**, claims 12 and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over **Seidman et al (6,298,482)** in view of **Zintel (6,779,004)** and claims 32-39 rejected under 35 U.S.C. 103(a) as being unpatentable over **Seidman et al (6,298,482)** in view of **Teich (6,088,826)**, applicant's arguments are not persuasive. Applicant argues that Seidman does not teach the amended/unamended claims limitations, i.e., "...detecting services available information, the services available information indicating an availability of services at the network termination unit, and transmit the services available information in the use pattern packets" that "...functional limitations must be evaluated and considered..." that "...a network termination unit, receives or decodes use pattern packets..." that "...a processor in the head end is not described as monitoring services available information..." that "...nothing teaches or suggests that there is a processor or processing means operable to both analyze data from use pattern packets and monitor services available..." (see page labeled 9 of 16+ of applicant's Remarks)

In response, Examiner disagrees. Examiner notes applicant's arguments, however, Seidman discloses in col.7, line, 56-col.8, line 1+, that "...VRS historical reports contain a number of n of SHR's 80 in additional to basic profile information...(col.7, line 56-66), that "...variety of viewing session types to the user, for example, 'academic' viewing, where embedded data is critical 'entertainment'...filtering out by the microcontroller, depending on the viewer's history and interests. The embedded data is offered to the viewer by displaying of a 'hyperlink'...user selects a hyperlink for delivery of a unit of embedded data, selection history record (SHR)...col.8, lines 1-5, lines 23-27) and also VOD services (col.8, line 39-45). All these services, academic, entertainment, Internet, VOD, etc., are services available at the STB, generated in the SHR records, and transmitted to the head end (content analyzer) via a port at the STB and also at the head end, where the head end processor tracks availability of services at each STB and customizes various content or services to users of the STB. The head end inherently includes a processor or processing unit, which monitors and analyzes the use pattern packets with available services information from each STB to customizes services to the various STB based on the received use pattern information and user interest data, which includes service available information. Furthermore the use pattern packets and user interest data generated at each STB includes network packet header, and these packets are periodically transmitted to the HE, or transmitted to the HE based on instructions sent to the STB from the HE, where the HE identifies the payload of the packets and customizes and delivers to each STB,

various services or content based on the received information within the packets (col.6, line 53-col.7, line 55, line 56-col.8, line 11, line 60-col.9, line 16).

With respect the 103(a) rejection of claims 6, 12 and 16, Seidman discloses identifying use pattern packets from among other packets, but silent to using a content discovery protocol to uniquely identify packets from among other packets. However, this deficiency is disclosed in **Zintel** reference, which discloses the use of discovery protocol to uniquely identify packets from among other packets (col. 4, lines 56-65, col. 5, lines 49-56, col. 7, lines 17-26 and col. 46, line 33-46). Hence the rejection is proper, meets all the claim limitations and maintained.

With respect the 103(a) rejection of claims 32-39 Seidman teaches tracking reception of content signals by the NTU, determine if data of a particular service that should have been received by the NTU at a point in time was received by the NTU and verify a delivery of an advertisement to the NTU, but fails to explicitly teach where the processor tracks a QoS of service s provided to the NTU. However, **Teich** reference figures 1-2, discloses method for checking data for errors in data communication systems where a destination system performs various error detection of a payload or packet to achieve a QoS of packets received, tracking reception of packets, determining if packet should be received at a point in time, verifies the delivery of a particular packet and communicates to a source for retransmitting of the packet if necessary (col.3, line 20-col.4, line 34). Hence the rejection is proper, meets all the claim limitations and maintained. Applicant's amended/unamended claims do not overcome the prior arts of records, as discussed below. **This office action is made Final.**

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5, 7-11, 14, 15, 18-31 and 40 are rejected under 35 U.S.C. 102(e) as being anticipated by **Seidman et al (6,298,482)**.

As to claim 1, note the **Seidman** reference figures 1-6, discloses multimedia broadcast and interactive services, which monitors viewer selection histories and further discloses a network termination unit 'NTU' (Set-top box 'STB' 1), comprising:

A port (Input port 2) operable to receive content signals (col.6, lines 9-25);

A demodulator (4) operable to demodulate the content signals into demodulated content signals (col.6, lines 9-25);

A decoder (6 and 7) operable to decode the demodulated content signals into display signals (col.6, lines 9-25); and

A module (Microcontroller 'MC' 9) operable to monitor services available information, which indicates an availability of services at the network termination unit (STB-1), extract content or services available identifying data, (figs. 4-7, col.5, lines 6-

22, lines 44-62 and col.6, lines 1-25) associated with a particular content or service signal of the content or service signals from that particular content or service signal;

Detect use patterns (MC-9) of a user viewing display signals on a viewing device (STB or TV Display), formatting (MC-9) data representative of the use patterns of services available information into network packets as payload data, setting a network packet header to identify the payload as a use patterns, forming a use pattern packets, and transmit the use patterns as use pattern packets, detect services available information, the services available information indicating an availability of services at the network termination unit, and transmit the services available information in the use pattern packets (col.6, line 53-col.7, line 55, line 56-col.8, line 45, col.10, lines 1-57), note that academic, entertainment, Internet, VOD, etc., are services available at the STB, generated in the SHR records, and transmitted to the Head end (HE, a content analyzer), which inherently includes a processor or processing unit for receiving SHR pattern packets from the STB-1, via a port, decoding the use pattern packets into data and where a processor analyzes the data to derive viewing information or user profile including services available information at each STB and customizes content or service to each STB based on these information.

As to claim 3, Seidman further discloses where the NTU comprises a cable modem (col.6, lines 9-25 and col.10, lines 41-57).

Claim 4 is met as previously discussed with respect to claim 1.

Claim 5 is met as previously discussed with respect to claim 1.

Claim 7 is met as previously discussed with respect to claim 1.

As to claim 9, the claimed "a content analyzer, comprising..." is composed of the same structural elements of previously rejected claim 1.

As to claim 10, Seidman further disclose where the content analyzer resides at the distribution hub (col. 45, line 34-col. 46, line 18 and line 43-col. 47, line 1+).

As to claim 11, Seidman further disclose where the content analyzer resides at the Head end (col.6, lines 1-8 and line 53-col.7, line 19).

Claim 14 is met as previously discussed with respect to claim 1.

As to claim 15, the claimed "a method of transmitting use patterns..." is composed of the same structural elements of previously rejected claim 1.

As to claims 18-20, Seidman further tracks video content, programs, advertisements, etc., delivery to 'NTU' (col.6, lines 1-8)

Claim 21 is met as previously discussed with respect to claim 1

As to claim 22, the claimed "a network termination unit, comprising..." is composed of the same structural elements of previously rejected claim 1.

Claim 23 is met as previously discussed with respect to claim 1.

Claim 24 is met as previously discussed with respect to claim 3.

Claim 25 is met as previously discussed with respect to claim 1.

As to claim 26, the claimed "a content analyzer, comprising..." is composed of the same structural elements of previously rejected claim 1.

Claim 27 is met as previously discussed with respect to claim 10.

Claim 28 is met as previously discussed with respect to claim 11.

Claim 29 is met as previously discussed with respect to claim 1.

As to claims 30-31, the claimed "an article containing machine-readable code..." is composed of the same structural elements of previously rejected claim 1.

As to claim 40, Seidman further discloses where the content identifying data is a transport stream identifier (col.10, lines 20-40 and line 58-col.11, line 23).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 6, 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Seidman et al (6,298,482)** as applied to claims 1, 10 and 15 above, and in view of **Zintel (6,779,004)**.

As to claims 6, 12 and 16, Seidman fails to explicitly teach where the use pattern packets are identified as such using a content discovery protocol that uniquely identifies use pattern packets from among other packets.

However, note the **Zintel** reference disclose dynamic connectivity among distributed devices and services, where packets are identified using discovery protocol that uniquely identifies use pattern packets from among other packets (col. 4, lines 56-65, col. 5, lines 49-56, col. 7, lines 17-26 and col. 46, line 33-46).

Therefore it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Zintel into the system of Seidman in order to enable the client or the service provider to automatically find controlled devices and services.

6. Claims 32-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Seidman et al (6,298,482)** as applied to claims 1 and 9 above, and in view of **Teich (6,088,826)**.

As to claims 32-35, Seidman, teaches tracking reception of content signals by the NTU, determine if data of a particular service that should have been received by the NTU at a point in time was received by the NTU and verify a delivery of an advertisement to the NTU, but fails to explicitly teach where the processor tracking a QoS of service is provided to the NTU,

However, not the **Teich** reference figures 1-2, discloses method for checking data for errors in data communication systems where a destination system performs various error detection of a payload or packet to achieve a QoS of packets received, tracking reception of packets, determining if packet should be received at a point in time, verifies the delivery of a particular packet and communicates to a source for retransmitting of the packet if necessary (col.3, line 20-col.4, line 34).

Therefore it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Teich into the system of Seidman in order to process error free packets or valid packets and provide an efficiency system and furthermore to notify

the source of packets or contents which have been received to enable the source or service provide to acknowledge receipt of its services

Claims 36-39 are met as previously discussed with respect to claims 32-35.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q. Shang** whose telephone number is **571-272-7355**. The examiner can normally be reached on **700am-400pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Christopher S. Kelley** can be reached on **571-272-7331**. The fax phone

number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC) at 866-217-9197 (toll-free)**. If you would like assistance from a **USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000**.



**Annan Q. Shang**

PATENT APPLICATION  
Attorney Do. No. 2705-167

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: James Allen Clark et al.

Confirmation No. 4571

Serial No.: 09/864,360      Examiner: Annan Q. Shang

Filed: May 23, 2001      Group Art Unit: 2623

For: CONTENT DISCOVERY AND DIFFERENTIAL ADVERTISING IN  
VIDEO DISTRIBUTION NETWORKS

Date: August 17, 2006

Mail Stop AMENDMENT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**AMENDMENT**

Responsive to the Office Action dated May 18, 2006, please amend the application as follows.

**Amendments to the Claims** begin on page 2.

**Remarks** begin on page 8.

**Amendments to the Claims**

1. (currently amended) A network termination unit, comprising:
  - a port operable to receive content signals;
  - a demodulator operable to demodulate the content signals into demodulated content signals;
  - a decoder operable to decode the demodulated content signals into display signals; and
  - a module operable to:
    - extract content identifying data associated with a particular content signal of the content signals from that particular content signal, ~~and to~~  
detect use patterns of a user viewing display signals on a viewing device, ~~and to~~  
transmit the use patterns as use pattern packets,
    - detect services available information, the services available information indicating an availability of services at the network termination unit, and  
transmit the services available information in the use pattern packets.
2. (original) The network termination unit of claim 1, wherein the network termination unit further comprises a set-top box.
3. (original) The network termination unit of claim 1, wherein the network termination unit further comprises a cable modem.
4. (original) The network termination unit of claim 1, wherein the viewing device further comprises a television.
5. (original) The network termination unit of claim 1, wherein the viewing device further comprises a computing device.

6. (currently amended) The network termination unit of claim 1, wherein the use pattern packets are identified as such using a content discovery protocol that uniquely identifies use pattern packets from among other packets.
7. (original) The network termination unit of claim 1, wherein the decoder is also operable to decode the demodulated content signals into command and control signals.
8. (canceled)
9. (previously presented) A content analyzer, comprising:
  - a port operable to receive use pattern packets from a network termination unit;
  - a decoder operable to decode the use pattern packets into data;
  - a processor operable to:
    - analyze the data to derive viewing information;
    - monitor services available information, the services available information indicating an availability of services at the network termination unit; and
    - characterize the network termination unit by that viewing information.
10. (original) The content analyzer of claim 9, wherein the content analyzer resides at the distribution hub.
11. (original) The content analyzer of claim 9, wherein the content analyzer resides at the head end.
12. (currently amended) The content analyzer of claim 9, wherein the decoder decodes the use pattern packets in accordance with a content discovery protocol that uniquely identifies use pattern packets from among other packets.
13. (canceled)

14. (original) The content analyzer of claim 9, wherein the processor is operable to use the characterization of the network termination unit to target video content to that network termination unit.

15. (previously presented) A method of transmitting use patterns, the method comprising:  
tracking use patterns of a viewing device, based upon selection of content on the viewing device;  
tracking services available information, the services available information indicating an availability of services for the viewing device;  
formatting data representative of the use patterns or services available information into network packets as payload data;  
setting a network packet header to identify the payload as use patterns, forming a use pattern packet; and  
transmitting the use pattern packet.

16. (currently amended) The method of claim 15, wherein setting a network packet header is done in accordance with a content discovery protocol that uniquely identifies use pattern packets from among other packets.

17. (canceled)

18. (currently Amended) The method of claim 15, wherein the method further comprises tracking video content delivery to the viewing device users.

19. (original) The method of claim 18, wherein the video content further comprises programs.

20. (original) The method of claim 18, wherein the video content further comprises advertising.

21. (original) The method of claim 15, wherein the use patterns or services available information of a viewing device further comprises use patterns or services available information of service extension offered on the viewing device.
22. (currently amended) A network termination unit, comprising:
  - a means for receiving video content signals;
  - a means for demodulating the video content signals into demodulated video content signals;
  - a means for decoding the demodulated video content signals into display signals;
  - a means for displaying the display signals;
  - a means for extracting content identifying data associated with a particular video content signal of the video content signals from that particular video content signal, and
  - a means for detecting use patterns ~~or services available information~~ of a user viewing display signals on the viewing device;
  - a means for detecting services available information, the services available information indicating an availability of services at the network termination unit; and to  
a means for transmitting the use patterns or and services available information as use pattern packets.
23. (original) The network termination unit of claim 22, wherein the network termination unit further comprises a cable set-top box.
24. (original) The network termination unit of claim 22, wherein the network termination unit further comprises a cable modem.

25. (currently amended) The network termination unit of claim 22, wherein the means for detecting ~~use patterns or~~ services available information is operable to detect delivery of video content.

26. (currently amended) A content analyzer, comprising:

- a means for receiving use pattern packets from a network termination unit;
- a means for decoding the use pattern packets into data; and
- a processing means operable to:
  - analyze the data to derive viewing information;
  - monitor the data for services available information, the services available information indicating an availability of services at the network termination unit; and
  - characterize the network termination unit by the that viewing information and the services available information.

27. (original) The content analyzer of claim 26, wherein the content analyzer resides at a distribution hub.

28. (original) The content analyzer of claim 26, wherein the content analyzer resides at a head end.

29. (original) The content analyzer of claim 26, wherein the processor is further operable to target the network termination unit by its characterization.

30. (previously presented) An article containing machine-readable code that, when executed, causes the machine to:

- track use patterns or services available information of a viewing device, based upon selection of video content on the viewing device;

track services available information, the services available information indicating an availability of services for the viewing device;

format data representative of the use patterns or services available information into network packets as payload data;

set a network packet header to identify the payload as use patterns, forming a use pattern packet; and

transmit the use pattern packet.

31. (original) The article of claim 30, wherein the article contains machine-readable code that, when executed, further causes the machine to monitor status of delivery of video content.
32. (currently amended) The content analyzer of claim 9, wherein the processor is further operable to ~~monitor~~ track a quality of service of services provided to the network termination unit.
33. (previously presented) The content analyzer of claim 32, wherein the processor is further operable to track reception of content signals by the network termination unit.
34. (previously presented) The content analyzer of claim 32, wherein the processor is further operable to determine if data of a particular service that should have been received by the network termination unit at a point in time was received by the network termination unit.
35. (currently amended) The content analyzer of claim 32, wherein the processor is further operable to verify a complete delivery of an advertisement to the network termination unit.
36. (previously presented) The network termination unit of claim 1, further comprising a module operable to monitor a quality of service of the content signals.

37. (previously presented) The network termination unit of claim 36, wherein the module operable to monitor the quality of service is further operable to track reception of the content signals by the network termination unit.

38. (previously presented) The network termination unit of claim 36, wherein the module operable to monitor the quality of service is further operable to determine if data of a monitored content signal that should have been received at a point in time was received.

39. (currently amended) The network termination unit of claim 36, wherein the module operable to monitor the quality of service is further operable to verify a complete delivery of an advertisement.

40. (previously presented) The network termination unit of claim 1, wherein the content identifying data is a transport stream identifier.

### **Remarks**

Claims 1-7, 9-12, 14-16, and 18-40 are pending.

Claim 8, 13, and 17 are cancelled.

Claims 1-7, 9-12, 14-16, and 18-40 are rejected.

### **Claim Amendments**

Claims 1, 6, 12, 16, 18, 22, 25, 26, 32, 35, and 39 have been amended. Support for the amendments may be found in the application as filed, for example, on pages 5-7. No new matter has been added.

### **Claim Rejections 35 USC 102(e)**

Claims 1-5, 7, 9-11, 14-15, 18-31 and 40 are rejected under 35 USC 102(e) as being anticipated by Seidman et al. (US 6,298,482).

Claim 1 as amended includes a module operable to detect services available information, the services available information indicating an availability of services at the network termination unit, and to transmit the services available information in the use pattern packets. Claim 22 includes similar elements.

First, the Examiner does not appear to be distinguishing use patterns from services available information. Claim 1 includes a module operable to detect use patterns and detect services available information. The services available information indicates an availability of services at the network termination unit. In Seidman, viewer response monitoring keeps track of viewer selection information. *Seidman, col. 3, ll. 39-41.* The STB relays the selection to the head end. *Seidman, col. 5, ll. 54-55.* Reports containing subscriber selection history information

can be used by the head end. *Seidman*, col. 6, ll. 53-54. Thus, what is detected is a user's interaction with the STB to make a selection.

The event of a user making a selection does not mean that a service associated with the selection was available. For example, a user may select a premium channel that the user does not subscribe to. Thus, the user made a selection of a service that is not available to the user. As a result, Seidman does not teach a module operable to detect services available information.

Furthermore, Seidman does not teach a module operable to transmit the services available information in the use pattern packets. In Seidman, the user is notified of the availability of viewing options through a program menu. *Seidman*, col. 6, ll. 66-67. Even if the notification implies that there is a module operable to detect services available information, such information is not transmitted in a use pattern packet. For example, a report sent to a head end by an STB may include a summary of viewing activity, or a detailed description of viewing behavior. *Seidman*, col. 6, ll. 44-49. Thus, viewing activity, viewing behavior, or the selections of the user, not the availability of services at a network termination unit, is transmitted to the head end.

Thus, Seidman does not teach each and every element of claim 1 or 22. The Applicant requests that the Examiner withdraw the rejection of claims 1 and 22, and dependent claims 2-7, 23-25, and 36-40.

With respect to claims 9 and 26, directed towards a content analyzer, the Examiner appears to be rejecting these claims by arguing that the claims have the same structural elements of claim 1. However, "a functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used." *MPEP 2173.05(g)*. Thus, even if claim 1 has the same structural elements as claim 9, functional limitations of the claims must be evaluated and

considered. For example, the elements of claims 1 and 9 are different through functional limitations. Claim 1 includes a module operable to transmit the use patterns as use pattern packets. In contrast, claim 9 includes a processor operable to analyze the data to derive viewing information, where the data was decoded from a use pattern packet. Thus, even if the module of claim 1 and the processor of claim 9 are interpreted as the same structural element, each has distinct functional limitations that are lacking in the other. Therefore, it is improper to reject claim 9 based solely on the structural elements of claim 1.

In addition, claim 9 includes a port operable to receive use pattern packets, or a decoder to decode the use pattern packets. Claim 26 includes a similar means for receiving use pattern packets. There is no indication in Seidman that an STB, which the Examiner cited as a network termination unit, receives or decodes use pattern packets. Thus, the STB does not include the port and the decoder of claim 9. As a result, the STB alone cannot be the content analyzer of claim 9 or 26.

Furthermore, claim 9 includes a processor operable to monitor services available information, the services available information indicating an availability of services at the network termination unit. Claim 26 includes similar processing means. Although the head end of Seidman may gather statistics on viewing selections, a processor in the head end is not described as monitoring services available information indicating an availability of services at the network termination unit. As a result, the head end of Seidman alone cannot be the content analyzer of claim 9 or 26.

In addition, even if the head end and STB of Seidman together are interpreted as a content analyzer, nothing teaches or suggests that there is a processor or processing means operable to both analyze data from use pattern packets and monitor services available

information. The STB and head end are not described as having a common processor. Therefore, even assuming that the STB may monitor services available information and the head end analyzes data from use pattern packets, there is no processor taught in Seidman that performs both. As a result Seidman does not teach each and every element of claims 9, 26, and dependent claims 10, 11, 14, and 27-29.

Furthermore, even if the STB and head end of Seidman are interpreted as the processor or processing means of claims 9 or 26, claims 10, 11, 27, and 28 further limit the content analyzer to residing in a distribution hub or a head end. Thus, if the content analyzer includes the STB, then the content analyzer does not reside at the distribution hub or head end. As a result, Seidman does not teach each and every element of claims 10, 11, 27, and 28.

In addition, claim 26 includes a processing means operable to characterize the network termination unit by the viewing information and the services available information. Thus, the content analyzer characterizes a network termination unit using services available information from the network termination unit.

As described above, Seidman does not teach a content analyzer operable to monitoring services available information from a network termination unit. However, even if it did, Seidman still does not teach a processing means operable to characterize the network termination unit according to the services available information. As a result, Seidman does not teach each and every element of claim 26, and dependent claims 27-29.

Claim 15 includes setting a network packet header to identify the payload of a network packet as use patterns, forming a use pattern packet. Claim 30 includes a similar element. Even if Seidman teaches sending viewer selections that are interpreted as use patterns, no mention is made of a setting of a network packet header to identify the payload as use patterns.

Thus, in order for Seidman to teach a header of a network packet, it must be inherent in Seidman. However, "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.' *MPEP 2112.4*. It is not necessary to the teachings in Seidman that the network packet header identifies the payload as use patterns. For example, although also not taught in Seidman, the payload itself may include identification that the payload includes use patterns. As a result, Seidman does not teach each and every element of claims 15 and 30 and dependent claims 18-21, and 31.

Claim 18 includes tracking video content delivery. Claims 25 and 31 include similar elements. Although Seidman describes tracking a user's viewing history, viewing history as used in Seidman and video content delivery are distinct. As described above, tracking of viewing history in Seidman is described only by monitoring a user's selections. Thus, what is tracked is a user's interaction with the STB to make a selection. Nothing is mentioned concerning the delivery of video content to the user. Although content is delivered to a user in Seidman, and the content may be customized using a user's viewing history, tracking that a user made a selection does not mean that the delivery of the content was tracked. As a result, Seidman does not teach each and every element of claims 18, 25, and 31.

Furthermore, claim 18 specifically recites tracking video content delivery to the viewing device. The selection of a user has no bearing on the delivery of the video content to the viewing device. That a user selected video content does not even mean that the video content was delivered. For example, a user may select video content, then the viewing device may receive the video content. Alternatively, the video content may be already delivered to and stored on the

viewing device before the user selects it. As a result, Seidman does not teach each and every element of claim 18.

#### **Claim Rejections 35 USC 103(a)**

Claims 6, 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seidman et al. as applied to claims 1, 10 and 15 and in view of Zintel (US 6,779,004).

Claims 6 recites that the use pattern packets are identified as such using a content discovery protocol that uniquely identifies use pattern packets from among other packets. Claims 12 and 16 include similar elements. The Examiner noted that Seidman did not teach that the use pattern packets are identified as such using a content discovery protocol. Zintel does teach a Simple Service Discovery Protocol (SSDP), however, the SSDP provides a peer discovery mechanism for the UPnP devices. *Zintel, col. 46, ll. 33-46*. The discovery process returns only basic information needed to connect with an embedded computing device. *Zintel, col. 47, ll. 16-17*. Nothing is mentioned for uniquely identifying use pattern packets from among other packets. As a result, the combination of Seidman and Zintel does not teach or suggest each and every element of claims 6, 12, and 16. The Applicant requests that the Examiner withdraw the rejection of claims 6, 12, and 16.

Claims 32-39 are rejected under 35 USC 103(a) as being unpatentable over Seidman et al as applied to claims 1 and 9 and in view of Teich (US 6,088,826).

Claim 32 includes a processor operable to track a quality of service of services provided to the network termination unit. Teich does teach communicating from a destination to a source system to switch the rigorousness of error detection and correction. *Teich, col. 5, ll. 41-44*. However, even if this is interpreted as a quality of service, there is no teaching or suggestion to

track such a communication or switch in error correction. Thus, the combination of Seidman and Teich does not teach or suggest each and every element of claim 32.

Claim 38 includes a module operable to determine if data of a monitored content signal that should have been received at a point in time was received. Claim 34 includes a similar element within a content analyzer. Teich operates on packets or frames individually. *Teich, col. 4, ll. 17-22, and FIG. 1.* It does not disclose any relationship between packets or frames. In addition, Seidman does not disclose any relationship of packets that should have been received by a point in time. Merely checking a received packet for errors, optionally correcting errors, and optionally requesting retransmission of an errored packet does not teach or imply any time relationship to other packets. As a result, there is no monitoring, tracking, or otherwise determining if data that should have been received was received. Therefore, the combination of Seidman and Teich does not teach or suggest each and every element of claims 34 or 38.

Claim 39 includes a module operable to verify a complete delivery of an advertisement. Claim 35 includes a similar element implemented in a content analyzer. As described above, there is no relationship between packets and frames suggested in Seidman and Teich. Since an advertisement will likely include more than one frame or packet, the lack of a relationship shows that the combination of Teich and Seidman does not teach or suggest verifying a complete delivery of an advertisement.

However, even if an advertisement includes only one packet or frame, combination of Teich and Seidman does not suggest verifying that it is complete. There is no suggestion of any indication that a single packet or a single frame was a complete advertisement in order to verify that it was. As a result, the combination of Teich and Seidman does not teach or suggest each and every element of claims 35 and 39.

**Conclusion**

For the foregoing reasons, reconsideration and allowance of claims 1-7, 9-12, 14-16, and 18-40 of the application as amended is solicited. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

**Customer No. 20575**

Respectfully submitted,

MARGER JOHNSON & McCOLLOM, P.C.



Derek Meeker  
Reg. No. 53,313

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,360	05/23/2001	James Allen Clark	2705-167	4571
20575	7590	05/18/2006		
MARGER JOHNSON & MCCOLLOM, P.C. 210 SW MORRISON STREET, SUITE 400 PORTLAND, OR 97204			EXAMINER	SHANG, ANNAN Q
			ART UNIT	PAPER NUMBER
			2623	

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/864,360	CLARK ET AL
	Examiner Annan Q. Shang	Art Unit 2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(e). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- Responsive to communication(s) filed on 24 April 2006.
- This action is FINAL.      2b)  This action is non-final.
- Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- Claim(s) \_\_\_\_\_ is/are allowed.
- Claim(s) 1-40 is/are rejected.
- Claim(s) \_\_\_\_\_ is/are objected to.
- Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- The specification is objected to by the Examiner.
- The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
  - Certified copies of the priority documents have been received.
  - Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- Notice of References Cited (PTO-892)
- Notice of Draftsperson's Patent Drawing Review (PTO-948)
- Information Disclosure Statement(s) (PTO-1449 or PTO/ISB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- Notice of Informal Patent Application (PTO-152)
- Other: \_\_\_\_\_

#### **DETAILED ACTION**

##### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/24/06 has been entered.

##### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5, 7-11, 13-15, 17-31 and 40 are rejected under 35 U.S.C. 102(e) as being anticipated by **Seldman et al (6,298,482)**.

As to claim 1, note the **Seldman** reference figures 1-6, discloses multimedia broadcast and interactive services, which monitors viewer selection histories and further discloses a network termination unit 'NTU' (Set-top box 'STB' 1), comprising:

A port (Input port 2) operable to receive content signals (col.6, lines 9-25);  
A demodulator (4) operable to demodulate the content signals into demodulated content signals (col.6, lines 9-25);  
A decoder (6 and 7) operable to decode the demodulate content signals into display signals (col.6, lines 9-25); and  
A module (Microcontroller 'MC' 9) operable to monitor services available information, which indicates an availability of services at the network termination unit (STB-1), extract content or services available identifying data (figs. 4-7, col.5, lines 6-22, lines 44-62 and col.6, lines 1-25) associated with a particular content or service signal of the content or service signals from that particular content or service signal and to detect use patterns of a user viewing display signals on a viewing device (STB or TV Display) and to transmit the use patterns as use pattern packets (col.6, line 53-col.7, line 55, line 56-col.8, line 11, col.10, lines 1-57).

As to claim 3, Seidman further discloses where the NTU comprises a cable modem (col.6, lines 9-25 and col.10, lines 41-57).

Claim 4 is met as previously discussed with respect to claim 1.

Claim 5 is met as previously discussed with respect to claim 1.

Claim 7 is met as previously discussed with respect to claim 1.

Claim 8 is met as previously discussed with respect to claim 1.

As to claim 9, the claimed "a content analyzer, comprising..." is composed of the same structural elements of previously rejected claim 1.

As to claim 10, Seidman further disclose where the content analyzer resides at the distribution hub (col. 45, line 34-col. 46, line 18 and line 43-col. 47, line 1+).

As to claim 11, Seidman further disclose where the content analyzer resides at the Head end (col.6, lines 1-8 and line 53-col.7, line 19).

Claim 13 is met as previously discussed with respect to claim 1.

Claim 14 is met as previously discussed with respect to claim 1.

As to claim 15, the claimed "a method of transmitting use patterns, the method comprising..." is composed of the same structural elements of previously rejected claim 1.

Claim 17 is met as previously discussed with respect to claim 1.

As to claims 18-20, Seidman further tracks video content, programs, advertisements, etc., delivery to 'NTU' (col.6, lines 1-8)

Claim 21 is met as previously discussed with respect to claim 1

As to claim 22, the claimed "a network termination unit, comprising..." is composed of the same structural elements of previously rejected claim 1.

Claim 23 is met as previously discussed with respect to claim 1.

Claim 24 is met as previously discussed with respect to claim 3.

Claim 25 is met as previously discussed with respect to claim 1.

As to claim 26, the claimed "a content analyzer, comprising..." is composed of the same structural elements of previously rejected claim 1.

Claim 27 is met as previously discussed with respect to claim 10.

Claim 28 is met as previously discussed with respect to claim 11.

Claim 29 is met as previously discussed with respect to claim 1.

As to claims 30-31, the claimed "an article containing machine-readable code... comprising..." is composed of the same structural elements of previously rejected claim 1.

As to claim 40, Seidman further discloses where the content identifying data is a transport stream identifier (col.10, lines 20-40 and line 58-col.11, line 23).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6, 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Seidman et al (6,298,482)** as applied to claims 1, 10 and 15 above, and in view of **ZIntel (6,779,004)**.

As to claims 6, 12 and 16, Seidman fails to explicitly teach where the use pattern packets are identified as such using a content discovery protocol.

However, note the **ZIntel** reference disclose dynamic connectivity among distributed devices and services, where packets are identified using discovery protocol (col. 4, lines 56-65, col. 5, lines 49-56, col. 7, lines 17-26 and col. 46, line 33-46).

Therefore it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Zintel into the system of Seidman in order to enable the client or the service provider to automatically find controlled devices and services.

6. Claims 32-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Seidman et al (6,298,482)** as applied to claims 1 and 9 above, and in view of **Teich (6,088,826)**.

As to claims 32-35, Seidman fails to explicitly teach where the processor monitor a QoS of services provided to the NTU, tracking reception of content signals by the NTU, determine if data of a particular service that should have been received by the NTU at a point in time was received by the NTU and verify a delivery of an advertisement to the NTU.

However, not the **Teich** reference figures 1-2, discloses method for checking data for errors in data communication systems where a destination system performs various error detection of a payload or packet to achieve a QoS of packets received, tracking reception of packets, determining if packet should be received at a point in time, verifies the delivery of a particular packet and communicates to a source for retransmitting of the packet if necessary (col.3, line 20-col.4, line 34).

Therefore it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Teich into the system of Seidman in order to process error free packets or valid packets and provide an efficiency system and furthermore to notify

the source of packets or contents which have been received to enable the source or service provide to acknowledge receipt of its services

Claims 36-39 are met as previously discussed with respect to claims 32-35.

***Response to Arguments***

7. Applicant's arguments with respect to claims 1-40 have been considered but are moot in view of the new ground(s) of rejection. The amendment to all the claims necessitated the new ground(s) of rejection discussed above. This office action is non-final.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ivanyi (6,286,140) disclose system and method for measuring and storing information pertaining to TV viewer or user behavior.

Drottar et al (6,181,704) disclose method and apparatus for input/output link retry, failure and recovery in computer network.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q. Shang** whose telephone number is **571-272-7355**. The examiner can normally be reached on **700am-400pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Christopher S. Kelley** can be reached on **571-272-7331**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC)** at **866-217-9197 (toll-free)**.

A handwritten signature in black ink, appearing to read "Annan Q. Shang".

Annan Q. Shang

<b>Notice of References Cited</b>		Application/Control No.	Applicant(s)/Patent Under	
		09/864,360	Reexamination CLARK ET AL.	
Examiner		Art Unit		Page 1 of 1
Annan Q. Shang		2623		

**U.S. PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-6,298,482	10-2001	Seidman et al.	725/101
*	B US-6,088,826	07-2000	Teich, Paul R.	714/774
*	C US-6,286,140	09-2001	Ivanyi, Thomas P.	725/14
*	D US-6,181,704	01-2001	Drottar et al.	370/410
	E US-			
	F US-			
	G US-			
	H US-			
	I US-			
	J US-			
	K US-			
	L US-			
	M US-			

**FOREIGN PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
N					
O					
P					
Q					
R					
S					
T					

**NON-PATENT DOCUMENTS**

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
U	
V	
W	
X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(e).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

PATENT APPLICATION  
Attorney Do. No. 2705-167

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: James Clark et al.

Confirmation No. 4571

Serial No.: 09/864,360 Examiner: Annan Q. Shang

Filed: May 23, 2001 Group Art Unit: 2617

For: CONTENT DISCOVERY AND DIFFERENTIAL ADVERTISING IN  
VIDEO DISTRIBUTION NETWORKS

Date: May 1, 2006

Mail Stop AMENDMENT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**SUPPLEMENTAL AMENDMENT**

Supplemental to the Amendment filed with a Request for Continued Examination filed on April 24, 2006, applicant provides a Summary of Interview by telephone with Examiner Shang held on March 7, 2006. This summary was inadvertently omitted with applicants' last response.

Summary of Interview begins on page 2.

## INTERVIEW SUMMARY

Please accept the following statement regarding the substance of the telephonic interview between Examiner Annan Q. Shang and Derek Meeker, attorney for applicants, initiated by Mr. Meeker on March 7, 2006.

The interview included discussions of the claim rejections, including the rejections of claims 1, 9, and 27 in reference to Herz et al U.S. Patent No. 5,758,257 ("Herz"). According to a suggestion by the Examiner, amendments have been made to the claims for clarification.

**Customer No. 20575**

Respectfully submitted,

MARGER JOHNSON & McCOLLOM, P.C.



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APR 24 2006

PATENT APPLICATION  
Attorney Do. No. 2705-167

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: James Clark et al.

Confirmation No. 4571

Serial No.: 09/864,360 Examiner: Annan Q. Shang

Filed: May 23, 2001 Group Art Unit: 2617

For: CONTENT DISCOVERY AND DIFFERENTIAL ADVERTISING  
IN VIDEO DISTRIBUTION NETWORKS

Date: April 24, 2006

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450AMENDMENT ACCOMPANYING A  
REQUEST FOR CONTINUED EXAMINATION

Responsive to the Final Office Action dated January 24, 2006, please amend the application as follows.

Amendments to the Claims begin on page 2.

Remarks begin on page 8.

04/25/2006 MBIAMS 00000011 09864368  
02 FC:1282 358.00 OP

Docket No. 2705-167

Page 1 of 10

Application No. 09/864,360

**Amendments to the Claims**

1. (currently amended) A network termination unit, comprising:
  - a port operable to receive content signals;
  - a demodulator operable to demodulate the content signals into demodulated content signals;
  - a decoder operable to decode the demodulated content signals into display signals; and
  - a module operable to extract content identifying data associated with a particular content signal of the content signals from that particular content signal, and to detect use patterns of a user viewing display signals on a viewing device and to transmit the use patterns as use pattern packets.
2. (original) The network termination unit of claim 1, wherein the network termination unit further comprises a set-top box.
3. (original) The network termination unit of claim 1, wherein the network termination unit further comprises a cable modem.
4. (original) The network termination unit of claim 1, wherein the viewing device further comprises a television.
5. (original) The network termination unit of claim 1, wherein the viewing device further comprises a computing device.
6. (original) The network termination unit of claim 1, wherein the use pattern packets are identified as such using a content discovery protocol.
7. (original) The network termination unit of claim 1, wherein the decoder is also operable to decode the demodulated content signals into command and control signals.

8. (currently amended) The network termination unit of claim 1, wherein the module is also operable to detect services available information, the services available information indicating an availability of services at the network termination unit.
9. (currently amended) A content analyzer, comprising:
  - a port operable to receive use pattern packets from a network termination unit;
  - a decoder operable to decode the use pattern packets into data;
  - a processor operable to:
    - analyze the data to derive viewing information;
    - monitor services available information, the services available information indicating an availability of services at the network termination unit; and
    - characterize the network termination unit by that viewing information.
10. (original) The content analyzer of claim 9, wherein the content analyzer resides at the distribution hub.
11. (original) The content analyzer of claim 9, wherein the content analyzer resides at the head end.
12. (original) The content analyzer of claim 9, wherein the decoder decodes the use pattern packets in accordance with a content discovery protocol.
13. (canceled)
14. (original) The content analyzer of claim 9, wherein the processor is operable to use the characterization of the network termination unit to target video content to that network termination unit.
15. (currently amended) A method of transmitting use patterns, the method comprising:
  - tracking use patterns of a viewing device, based upon selection of content on the viewing device;

tracking services available information, the services available information indicating an availability of services for the viewing device;

formatting data representative of the use patterns or services available information into network packets as payload data;

setting a network packet header to identify the payload as use patterns, forming a use pattern packet; and

transmitting the use pattern packet.

16. (original) The method of claim 15, wherein setting a network packet header is done in accordance with a content discovery protocol.

17. (canceled)

18. (original) The method of claim 15, wherein the method further comprises tracking video content delivery to users.

19. (original) The method of claim 18, wherein the video content further comprises programs.

20. (original) The method of claim 18, wherein the video content further comprises advertising.

21. (original) The method of claim 15, wherein the use patterns or services available information of a viewing device further comprises use patterns or services available information of service extension offered on the viewing device.

22. (currently amended) A network termination unit, comprising:

a means for receiving video content signals;

a means for demodulating the video content signals into demodulated video content signals;

a means for decoding the demodulated video content signals into display signals;

a means for displaying the display signals; and

a means for extracting content identifying data associated with a particular video content signal of the video content signals from that particular video content signal, and  
a means for detecting use patterns or services available information of a user viewing display signals on the viewing device and to transmit the use patterns or services available information as use pattern packets.

23. (original) The network termination unit of claim 22, wherein the network termination unit further comprises a cable set-top box.

24. (original) The network termination unit of claim 22, wherein the network termination unit further comprises a cable modem.

25. (original) The network termination unit of claim 22, wherein the means for detecting use patterns or services available information is operable to detect delivery of video content.

26. (currently amended) A content analyzer, comprising:

a means for receiving use pattern packets from a network termination unit;

a means for decoding the use pattern packets into data;

a processing means operable to:

analyze the data to derive viewing information;

monitor services available information, the services available information indicating an availability of services at the network termination unit; and

characterize the network termination unit by that viewing information.

27. (original) The content analyzer of claim 26, wherein the content analyzer resides at a distribution hub.

28. (original) The content analyzer of claim 26, wherein the content analyzer resides at a head end.

29. (original) The content analyzer of claim 26, wherein the processor is further operable to target the network termination unit by its characterization.

30. (currently amended) An article containing machine-readable code that, when executed, causes the machine to:

track use patterns or services available information of a viewing device, based upon selection of video content on the viewing device;

—track services available information, the services available information indicating an availability of services for the viewing device;

format data representative of the use patterns or services available information into network packets as payload data;

set a network packet header to identify the payload as use patterns, forming a use pattern packet; and

transmit the use pattern packet.

31. (original) The article of claim 30, wherein the article contains machine-readable code that, when executed, further causes the machine to monitor status of delivery of video content.

32. (new) The content analyzer of claim 9, wherein the processor is further operable to monitor a quality of service of services provided to the network termination unit.

33. (new) The content analyzer of claim 32, wherein the processor is further operable to track reception of content signals by the network termination unit.

34. (new) The content analyzer of claim 32, wherein the processor is further operable to determine if data of a particular service that should have been received by the network termination unit at a point in time was received by the network termination unit.

35. (new) The content analyzer of claim 32, wherein the processor is further operable to verify a delivery of an advertisement to the network termination unit.

36. (new) The network termination unit of claim 1, further comprising a module operable to monitor a quality of service of the content signals.

37. (new) The network termination unit of claim 36, wherein the module operable to monitor the quality of service is further operable to track reception of the content signals by the network termination unit.

38. (new) The network termination unit of claim 36, wherein the module operable to monitor the quality of service is further operable to determine if data of a monitored content signal that should have been received at a point in time was received.

39. (new) The network termination unit of claim 36, wherein the module operable to monitor the quality of service is further operable to verify a delivery of an advertisement.

40. (new) The network termination unit of claim 1, wherein the content identifying data is a transport stream identifier.

**Remarks**

Claims 1-12, 14-16, and 18-40 are pending.

Claims 1-12, 14-16, and 18-31 are rejected.

Claims 32-40 are new.

Claims 1-5, 7-11, 14-15, 18-31 are rejected under 35 U.S.C. 102(b).

Claims 6, 12, and 16 are rejected under 35 U.S.C. 103(a).

**Claim Amendments**

Claims 1, 8, 9, 15, 22, 26, and 30 have been amended. Claims 32-40 are new.

Support for the amendments and the new claims may be found in the specification as filed, for example, on pages 4-7. No new matter has been added.

**Claim Rejections – 35 U.S.C. § 102**

Claims 1-5, 7-11, 13-15, and 17-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Herz et al U.S. Patent No. 5,758,257 ("Herz").

Claim 1 has been amended to include "a module operable to extract content identifying data associated with a particular content signal of the content signals from that particular content signal." Claim 22 recites a similar element. Although in Herz, shows have been described as having associated content profiles, the associated content profiles are not described as being a part of the show. *Herz, col. 41, ll. 1-3.* Thus, no module operable to extract content identifying data from a content signal is disclosed in Herz. As a result, Herz does not teach each and every element of claim 1, and similarly claim 22. The Applicant respectfully requests that the Examiner withdraw the rejection of claims 1 and 22, and dependent claims 2-8, and 23-25.

Claim 9 has been amended to include "a processor operable to monitor services available information, the services available information indicating an availability of services at the network termination unit." Claims 8, 15, 26, and 30 include similar elements.

Although Herz describes "a means for monitoring which shows are being watched by the consumer," no means, device, or method is described to monitor the availability of services at the network termination unit. *Herz, col. 41, ll. 6-8.*

Furthermore, assuming that a show being watched means that the show is available, the state of the show being available does not mean that the state of availability was monitored. The distinction is the difference between the existence of a state and the monitoring of that state.

As a result, Herz does not teach each and every element of claims 8, 9, 15, 26, and 30, and dependent claims 10-12, 14, 16, 18-21, 27-29, and 30-31. The Applicant respectfully requests that the Examiner withdraw the rejections of claims 8-12, 14-16, 18-21, and 26-31.

Claim 32 recites "a processor operable to monitor a quality of service of services provided to the network termination unit." Claim 36 includes a similar element. Although as described above, Herz describes monitoring shows being watched, there is no description of monitoring the quality of service of those show or other services. Thus, Herz does not teach each and every element of claim 32 and 36, and dependent claims 33-35, and 37-39.

#### Claim Rejections – 35 U.S.C. § 103

Claims 6, 12, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herz as applied to claims 1, 10, and 15 above, and in view of Zintel U.S. Patent No. 6,779,004 ("Zintel").

As described above, Herz does not teach each and every element of independent claims 1, 9, and 15, the parent claims of claims 6, 12, and 16. The addition of Zintel, both separate and in combination with Herz, does not suggest or render obvious each and every element of independent claims 1, 9, and 15. Thus the Applicant requests that the Examiner withdraw the rejections of claims 6, 12, and 16.

**Conclusion**

For the foregoing reasons, reconsideration and allowance of claims 1-12, 14-16, and 18-40 of the application as amended is solicited. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

**Customer No. 20575**

Respectfully submitted,

MARGER JOHNSON & MCCOLLOM, P.C.



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Docket No. 2705-167

Page 10 of 10

Application No. 09/864,360



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,360	05/23/2001	James Allen Clark	2705-167	4571
20575	7590	01/24/2006		
MARGER JOHNSON & MCCOLLOM, P.C.			EXAMINER	
210 SW MORRISON STREET, SUITE 400			SHANG, ANNAN Q	
PORTLAND, OR 97204			ART UNIT	PAPER NUMBER
			2617	

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/884,380	CLARK ET AL.
	Examiner Annan Q. Shang	Art Unit 2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(e). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the minimum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, in general, constitute a cause for abandonment (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- Responsive to communication(s) filed on 10 November 2005.
- This action is FINAL.  This action is non-final.
- Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- Claim(s) 1-31 is/are pending in the application.
  - Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
  - Claim(s) \_\_\_\_\_ is/are allowed.
  - Claim(s) 1-31 is/are rejected.
  - Claim(s) \_\_\_\_\_ is/are objected to.
  - Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- The specification is objected to by the Examiner.
- The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - All
  - Some \*
  - None of:
    - Certified copies of the priority documents have been received.
    - Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- Notice of References Cited (PTO-892)
- Notice of Draftsperson's Patent Drawing Review (PTO-948)
- Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- Notice of Informal Patent Application (PTO-152)
- Other: \_\_\_\_\_

## DETAILED ACTION

### ***Response to Arguments***

1. Applicant's arguments/amendment filed 11/10/05 have been fully considered but they are not persuasive.

With respect to independent claims 1 and 22 and amended independent claims 9, 15, 26 and 30, applicant argues that the prior art of records Herz et al (6,088,722), "does not teach decoding of the content signals. No decoder is mentioned in Herz. Second, even if the 'content signals' cited by the Examiner are decoded, the signals are not display signals, but are 'content profiles'..." (see page 7 of 9 of applicant's Remarks).

In response, Examiner disagrees. Examiner notes applicant's arguments, however, Herz discloses a cable Head end which encodes, encrypts and compresses multimedia programs to meet bandwidth demands and transmits bit stream of the encodes, encrypted and compressed video program or multimedia to various set top multimedia terminal (STTMT) via CATV system, wireless cable, DBS, optical fiber/coaxial cable, etc., (fig.9-10, col.43, line 66-col.44, line 21 and line 35-col.45, line 37), where the STTMT, decodes, decrypts and decompresses the signal for presentation on Display Device 1110. Note further that Descrambler 1016 is a decoder.

With respect to amended claims 9, 15, 26 and 30, applicant further argues that Herz does not teach detecting, tracking or monitoring services available and further argues that Herz does not teach content analyzer (see page 8 of 9 of applicant's Remarks).

In response, Examiner disagrees. Examiner notes applicant's arguments however, Herz further discloses automatically monitors and tracks available multimedia services (col.9, lines 29-40, lines 54-63) and dynamically transmitting on demand or in real time to the various STTMT base on the usage pattern (col.30, lines 17-54 and col.45, lines 6-37 and col.43, line 66-col.44, line 21 and line 35-col.45, line 37)). Herz, further teaches a System Controller/Distribution System 506/504 "content analyzer" for determining available programs or multimedia services, including most popular programs (col.26, lines 38-67, col.28, lines 19-33, col.30, line 18-54 and col.49, lines 11-45). Hence, applicant's amended and unamended independent claims do not overcome the prior art of records, the rejections are hereby maintained and repeated below. This office action is made final.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 7-11, 13-15 and 17-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Herz et al (5,758,257).

As to claims 1-2, note the Herz reference figures 4-6 and 9-10, discloses system and method for scheduling broadcast (analog or digital), in a one-way (fig. 4), two-way

cable system return and two telephone systems return (figs 5-6 and col. 41, lines 42-56), of and access to video programs and other data using customer profiles and further discloses a network termination unit (Set Top Multimedia Terminal 'STMT,' figs. 9-10), which receives from CATV system, wireless cable, DBS, telco systems, off air, etc., comprising:

Set Top Multimedia Terminal 'STMT' includes a port to receive content signals (video programs, news, music, etc., col. 9, lines 20-25 and col. 46, lines 24-35, from Head end 408/502), a demodulator operable to demodulate the content signals into display signals and a decoder operable to decode the demodulated content signals into display signals (figs 1-3 and col. 24, line 53-col. 25, line 6), note that the analog or digital data or bit stream received is demodulated, decoded, etc., into command and control signals, processed, before displaying on a display device or TV;

a module (Processor 906 or Microprocessor 1006 'P/MP' 906/1006, col. 45, lines 34-col. 46, line 18 and line 43-col. 47, line 1+) operable to detect use patterns of the user viewing display signals (col. 14, lines 4-10, col. 25, lines 31-44, col. 26, line 51-col. 27, line 6 and col. 29, line 52-col. 30, line 40) on a viewing device (TV) and to transmit the use patterns as use pattern packets (col. 40, line 66-col. 41, line 18, col. 42, lines 25-67), note that M/MP 906/1006 monitors usage or watched multimedia patterns and calculates an agreement matrix of each watched or interacted multimedia, such as different movies, games, news, music, etc., the various characteristics used for the define programs (col. 19, line 6-col. 21, line 1+), formats accordingly to include the appropriate packet header to identifier the multimedia type and transmits to the Head

end, which detects services or multimedia available (col. 9, line 20-27, line 62-col. 10, line 20) to the STMT and targets multimedia to the STMT based on the matrix or profile.

Head end System Controller/Distribution System 506/504 "content analyzer" automatically monitors and tracks available multimedia services (col.9, lines 29-40, lines 54-63) and dynamically transmitting on demand or in real time to the various STTMT base on the usage pattern (col.30, lines 17-54 and col.45, lines 6-37), note that System Controller/Distribution System 506/504, determines available programs or multimedia services including most popular programs (col.26, lines 38-67, col.28, lines 19-33, col.30, line 18-54 and col.49, lines 11-45)

As to claim 3, Herz further discloses where STMT comprises a demodulator/modulator or cable modem to demodulator and modulator 1024 signals over the CATV cable network (fig. 10, lines 6-9).

Claim 4 is met as previously discussed with respect to claim 1.

As to claim 5, Herz further discloses where the STMT/TV includes a computing device (col. 45, lines 9-55 and col. 46, lines 24-61).

Claim 7 is met as previously discussed with respect to claim 1.

Claim 8 is met as previously discussed with respect to claim 1.

As to claim 9, the claimed "a content analyzer, comprising..." is composed of the same structural elements of previously rejected claim 1.

As to claim 10, Herz further disclose where the content analyzer resides at the distribution hub (col. 45, line 34-col. 46, line 18 and line 43-col. 47, line 1+).

As to claim 11, Herz further disclose where the content analyzer resides at the Head end (col. 42, lines 25-67).

Claim 13 is met as previously discussed with respect to claim 1.

Claim 14 is met as previously discussed with respect to claim 1.

As to claim 15, the claimed "a method of transmitting use patterns, the method comprising..." is composed of the same structural elements of previously rejected claim 1.

Claim 17 is met as previously discussed with respect to claim 1.

As to claims 18-20, Herz further tracks video content, programs, advertisements, etc., delivery to STMT (col. 23, lines 10-18, col. 29, lines 31-50, col. 41, lines 20-25 and col. 47, line 53-col. 48, line 4)

Claim 21 is met as previously discussed with respect to claim 1

As to claim 22, the claimed "a network termination unit, comprising..." is composed of the same structural elements of previously rejected claim 1.

Claim 23 is met as previously discussed with respect to claim 1.

Claim 24 is met as previously discussed with respect to claim 3.

Claim 25 is met as previously discussed with respect to claim 1.

As to claim 26, the claimed "a content analyzer, comprising..." is composed of the same structural elements of previously rejected claim 1.

Claim 27 is met as previously discussed with respect to claim 10.

Claim 28 is met as previously discussed with respect to claim 11.

Claim 29 is met as previously discussed with respect to claim 1.

As to claims 30-31, the claimed "an article containing machine-readable code... comprising..." is composed of the same structural elements of previously rejected claim 1.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6, 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Herz et al (5,758,257)** as applied to claims 1, 10 and 15 above, and in view of **Zintel (6,779,004)**.

As to claims 6, 12 and 16, Herz fails to explicitly teach where the use pattern packets are identified as such using a content discovery protocol.

However, note the **Zintel** reference disclose dynamic connectivity among distributed devices and services, where packets are identified using discovery protocol (col. 4, lines 56-65, col. 5, lines 49-56, col. 7, lines 17-26 and col. 46, line 33-46).

Therefore it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Zintel into the system of Herz in order to enable the client or the service provider to automatically find controlled devices and services.

***Conclusion***

**6. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

**7.** Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q. Shang** whose telephone number is **571-272-7355**. The examiner can normally be reached on **700am-400pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Christopher S. Kelley** can be reached on **571-272-7331**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC)** at **866-217-9197** (toll-free).

  
Annan Q. Shang

  
CHRIS KELLEY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

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PATENT APPLICATION  
Docket No. 2705-167

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: James Clark et al.

Serial No. 09/864,360 Examiner: Annan Q. Shang

Confirmation No. 4571

Filed: May 23, 2001 Group Art Unit: 2617

For: CONTENT DISCOVERY AND DIFFERENTIAL ADVERTISING  
IN VIDEO DISTRIBUTION NETWORKS

Date: November 11, 2005

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

## AMENDMENT

Responsive to the Office Action dated August 11, 2005, please amend the application as follows.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 7 of this paper.

Docket No. 2705-167

Page 1 of 9

Application No. 09/864,360

## IN THE CLAIMS

1. (Currently amended) A network termination unit, comprising:
  - a)—a port operable to receive content signals;
  - b)—a demodulator operable to demodulate the content signals into demodulated content signals;
  - c)—a decoder operable to decode the demodulated content signals into display signals; and
  - d)—a module operable to detect use patterns of a user viewing display signals on a viewing device and to transmit the use patterns as use pattern packets.
2. (Original) The network termination unit of claim 1, wherein the network termination unit further comprises a set-top box.
3. (Original) The network termination unit of claim 1, wherein the network termination unit further comprises a cable modem.
4. (Original) The network termination unit of claim 1, wherein the viewing device further comprises a television.
5. (Original) The network termination unit of claim 1, wherein the viewing device further comprises a computing device.
6. (Original) The network termination unit of claim 1, wherein the use pattern packets are identified as such using a content discovery protocol.
7. (Original) The network termination unit of claim 1, wherein the decoder is also operable to decode the demodulated content signals into command and control signals.
8. (Original) The network termination unit of claim 1, wherein the module is also operable to detect services available information.
9. (Currently amended) A content analyzer, comprising:
  - a)—a port operable to receive use pattern packets from a network termination unit;

- b) — a decoder operable to decode the use pattern packets into data;
- c) — a processor operable to:
  - i) — analyze the data to derive viewing information;
  - monitor services available information; and
  - ii) — characterize the network termination unit by that viewing information.

10. (Original) The content analyzer of claim 9, wherein the content analyzer resides at the distribution hub.

11. (Original) The content analyzer of claim 9, wherein the content analyzer resides at the head end.

12. (Original) The content analyzer of claim 9, wherein the decoder decodes the use pattern packets in accordance with a content discovery protocol.

13. (Cancelled)

14. (Original) The content analyzer of claim 9, wherein the processor is operable to use the characterization of the network termination unit to target video content to that network termination unit.

15. (Currently amended) A method of transmitting use patterns, the method comprising:

- a) — tracking use patterns of a viewing device, based upon selection of content on the viewing device;
- tracking services available information;
- b) — formatting data representative of the use patterns or services available information into network packets as payload data;
- c) — setting a network packet header to identify the payload as use patterns, forming a use pattern packet; and
- d) — transmitting the use pattern packet.

16. (Original) The method of claim 15, wherein setting a network packet header is done in accordance with a content discovery protocol.
17. (Cancelled)
18. (Original) The method of claim 15, wherein the method further comprises tracking video content delivery to users.
19. (Original) The method of claim 18, wherein the video content further comprises programs.
20. (Original) The method of claim 18, wherein the video content further comprises advertising.
21. (Original) The method of claim 15, wherein the use patterns or services available information of a viewing device further comprises use patterns or services available information of service extension offered on the viewing device.
22. (Currently amended) A network termination unit, comprising:
  - a) a means for receiving video content signals;
  - b) a means for demodulating the video content signals into demodulated video content signals;
  - c) a means for decoding the demodulated video content signals into display signals;
  - d) a means for displaying the display signals; and
  - e) a means for detecting use patterns or services available information of a user viewing display signals on the viewing device and to transmit the use patterns or services available information as use pattern packets.
23. (Original) The network termination unit of claim 22, wherein the network termination unit further comprises a cable set-top box.

24. (Original) The network termination unit of claim 22, wherein the network termination unit further comprises a cable modem.
25. (Original) The network termination unit of claim 22, wherein the means for detecting use patterns or services available information is operable to detect delivery of video content.
26. (Currently amended) A content analyzer, comprising:
  - a) a means for receiving use pattern packets from a network termination unit;
  - b) a means for decoding the use pattern packets into data;
  - c) a processing means operable to:
    - i) analyze the data to derive viewing information;
    - monitor services available information; and
    - ii) characterize the network termination unit by that viewing information.
27. (Original) The content analyzer of claim 26, wherein the content analyzer resides at a distribution hub.
28. (Original) The content analyzer of claim 26, wherein the content analyzer resides at a head end.
29. (Original) The content analyzer of claim 26, wherein the processor is further operable to target the network termination unit by its characterization.
30. (Currently amended) An article containing machine-readable code that, when executed, causes the machine to:
  - a) track use patterns or services available information of a viewing device, based upon selection of video content on the viewing device;  
track services available information;
  - b) format data representative of the use patterns or services available information into network packets as payload data;

e) —— set a network packet header to identify the payload as use patterns, forming a use pattern packet; and

d) —— transmit the use pattern packet.

31. (Original) The article of claim 30, wherein the article contains machine-readable code that, when executed, further causes the machine to monitor status of delivery of video content.

**REMARKS**

Claims 1-12, 14-16, and 18-31 are pending in the application. Claims 13 and 17 are cancelled. Claims 1-5, 7-11, 14-15, 18-31 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,758,257, Herz et al. ("Hertz"). Claims 6, 12, and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hertz as applied to claims 1, 10, and 15, and in view of U.S. Patent No. 6,779,004, Zintel ("Zintel").

**Claim Amendments**

Claims 1, 9, 15, 22 and 30 have been amended to remove extraneous formatting.

Claims 9 and 26 have been amended to include a processor operable to monitor services available information. Support for these amendments may be found on pages 6-7. No new matter has been added.

Claims 15 and 30 have been amended to include tracking services available information. Support for this amendment may be found on page 7 of the application. No new matter has been added.

**Claim Rejections – 35 U.S.C. § 102**

Herz does not teach decoding of content signals into display signals as recited in claims 1 and 22. First, Herz does not teach decoding of content signals. No decoder is mentioned in Herz. Second, even if the "content signals" cited by the Examiner are decoded, the signals are not display signals, but are "content profiles". *See Herz, col. 24, line 56 – col. 25, line 6.* Nowhere in Herz are the content profiles displayed from a network termination unit. As a result, Herz does not teach each and every element of claims 1 or 22. The Applicant respectfully requests that the Examiner withdraw the rejection of claim 1 and dependent claims 2-5, and 7-8, and claim 22 and dependent claims 23-25.

Herz does not teach a computing device as a viewing device as recited in claim 5. No computing device as a viewing device is mentioned in Herz. As a result, Herz does not teach each and every element of claim 5. The Applicant respectfully requests that the Examiner withdraw the rejection of claim 5.

Herz does not teach decoding the demodulated content signals into command and control signals as recited in claim 7. The set top multimedia terminal of Herz may receive content/customer profiles and calculate an agreement matrix using the profiles, but the terminal was not commanded nor controlled by the content profiles. *Herz, col. 25, ll. 16-19.*

The terminal of Herz merely used the profiles as data to calculate the agreement matrix. Hence, Herz does not teach each and every element of claim 7. The Applicant respectfully requests that the Examiner withdraw the rejection of claim 7.

Herz does not teach detecting, tracking, or monitoring services available as recited in claims 8, 9, 15, 26, and 30. Although Herz discloses "selecting receipt of desired data services and shop at home services, and selecting from available music and multimedia offerings," Herz does not disclose detecting, tracking, or monitoring the services available. Herz may select from the available services, but it does not detect, track, or monitor the services. As a result, Herz does not teach each and every element of claims 8, 9, 15, 26, 30, or dependent claims 10, 11, 14, 18-21, 27-29, or 31. The Applicant respectfully requests that the Examiner withdraw the rejection of claims 8-11, 14-15, 18-21, and 26-31.

Herz does not teach a content analyzer in a head end as used in claim 11. Although Herz discloses a "head end", the head end in Herz is always described as receiving modulated channels or program sources. *See Herz, Figs. 4-6, and col. 42, 27-30.* As used in the application, the head end processes the programs before the programs are modulated for transmission. *See Application, page 3, ll. 13-25.* Thus, Herz does not teach each and every element of claim 11. The Applicant respectfully requests that the Examiner withdraw the rejection of claim 11.

Herz does not teach detecting or tracking video content delivery to users as recited in claims 18, 25, and 31. Herz discloses tracking customer preferences. The selection of the programs may be tracked to create the customer preference, but tracking of the delivery is not inherently required. "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *MPEP 2112 IV. quoting Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).* It does not necessarily flow from Herz that tracking selection of programs results in tracking of delivery. As a result, Herz does not teach each and every element of claims 18, 25, or 31, or claims dependent from claim 18, claims 19 or 20. The Applicant respectfully requests that the Examiner withdraw the rejection of claims 18-20, 25, and 31.

Herz does not teach tracking use patterns or services available information of a service extension offered on the viewing device as recited in claim 21. Even if service extensions are disclosed in Herz, no tracking of the use of the service extensions is mentioned. As a result, Herz does not teach each and every element of claim 21. The Applicant respectfully requests that the Examiner withdraw the rejection of claim 21.

**Claim Rejections – 35 U.S.C. § 103**

The combination of Herz and Zintel does not render obvious each and every element of claims 6, 12, and 16. First, as described above, Herz does not teach all of the elements of claims 1, 9, and 15. The combination of Herz and Zintel does not contain a suggestion of the missing elements.

Second, the combination of Herz and Zintel does not render obvious a content discovery protocol as recited in claims 6, 12, and 16. "The format of the header that identifies use pattern packets, as well as the format of the payload data, will be referred to as content discovery protocol." *Application, page 5, line 20*. The combination of Herz and Zintel does not have a suggestion for a protocol for use pattern packets. For example, the Simple Service Discovery Protocol, cited by the Examiner, is "for discovery of devices on IP networks." *Zintel, col. 46, ll. 33-35*. Such discovery of devices does not suggest a packet for use patterns.

Therefore, the combination of Herz and Zintel does not teach each and every element of claims 6, 12, or 16. The Applicant respectfully requests that the Examiner withdraw the rejections of claims 6, 12, and 16.

**Conclusion**

For the foregoing reasons, reconsideration and allowance of claims 1-12, 14-16, and 18-31 of the application as amended is solicited. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Customer No. 20575

Respectfully submitted,

MARGER JOHNSON & MCCOLLOM, P.C.

Julie L. Reed

Julie Reed  
Reg. No. 35,349

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503-222-3613

Docket No. 2705-167

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Application No. 09/864,360



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APPLICATION NO.	FILED DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,360	05/23/2001	James Allen Clark	2705-167	4571
20575	7590	08/11/2005	EXAMINER	
MARGER JOHNSON & MCCOLLOM, P.C.			SHANG, ANNAN Q	
210 SW MORRISON STREET, SUITE 400			ART UNIT	PAPER NUMBER
PORTLAND, OR 97204			2617	

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/884,380	CLARK ET AL.	
Examiner	Art Unit		
Annan Q. Shang	2617		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### ***Office Action Summary***

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.

- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO FEE is paid within the period specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- To receive an extension of time, a reply must be filed for reply, by time, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may receive an delayed term adjustment. See 37 CFR 1.704(b).

### Status

1)  Responsive to communication(s) filed on 20 June 2005.  
2a)  This action is FINAL.                    2b)  This action is non-final.  
3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### **Disposition of Claims**

4)  Claim(s) 1-31 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-31 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All     Some \* c)  None of:

    1.  Certified copies of the priority documents have been received.

    2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_.

    3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 7-11, 13-15 and 17-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Herz et al (5,758,257).

As to claims 1-2, note the Herz reference figures 4-6 and 9-10, discloses system and method for scheduling broadcast (analog or digital), in a one-way (fig. 4), two-way cable system return and two telephone systems return (figs 5-6 and col. 41, lines 42-56), of and access to video programs and other data using customer profiles and further discloses a network termination unit (Set Top Multimedia Terminal 'STMT,' figs. 9-10), which receives from CATV system, wireless cable, DBS, telco systems, off air, etc., comprising:

Set Top Multimedia Terminal 'STMT' includes a port to receive content signals (video programs, news, music, etc., col. 9, lines 20-25 and col. 46, lines 24-35, from Head end 408/502), a demodulator operable to demodulate the content signals into display signals and a decoder operable to decode the demodulated content signals into display signals (figs 1-3 and col. 24, line 53-col. 25, line 6), note that the analog or

digital data or bit stream received is demodulated, decoded, etc., into command and control signals, processed, before displaying on a display device or TV; a module (Processor 906 or Microprocessor 1006 'P/MP' 906/1006, col. 45, lines 34-col. 46, line 18 and line 43-col. 47, line 1+) operable to detect use patterns of the user viewing display signals (col. 14, lines 4-10, col. 25, lines 31-44, col. 26, line 51-col. 27, line 6 and col. 29, line 52-col. 30, line 40) on a viewing device (TV) and to transmit the use patterns as use pattern packets (col. 40, line 66-col. 41, line 18, col. 42, lines 25-67), note that M/MP 906/1006 monitors usage or watched multimedia patterns and calculates an agreement matrix of each watched or interacted multimedia, such as different movies, games, news, music, etc., the various characteristics used for the define programs (col. 19, line 6-col. 21, line 1+), formats accordingly to include the appropriate packet header to identifier the multimedia type and transmits to the Head end, which detects services or multimedia available (col. 9, line 20-27, line 62-col. 10, line 20) to the STMT and targets multimedia to the STMT based on the matrix or profile.

As to claim 3, Herz further discloses where STMT comprises a demodulator/modulator or cable modem to demodulator and modulator 1024 signals over the CATV cable network (fig. 10, lines 6-9).

Claim 4 is met as previously discussed with respect to claim 1.

As to claim 5, Herz further discloses where the STMT/TV includes a computing device (col. 45, lines 9-55 and col. 46, lines 24-61).

Claim 7 is met as previously discussed with respect to claim 1.

Claim 8 is met as previously discussed with respect to claim 1.

As to claim 9, the claimed "a content analyzer, comprising..." is composed of the same structural elements of previously rejected claim 1.

As to claim 10, Herz further disclose where the content analyzer resides at the distribution hub (col. 45, line 34-col. 46, line 18 and line 43-col. 47, line 1+).

As to claim 11, Herz further disclose where the content analyzer resides at the Head end (col. 42, lines 25-67).

Claim 13 is met as previously discussed with respect to claim 1.

Claim 14 is met as previously discussed with respect to claim 1.

As to claim 15, the claimed "a method of transmitting use patterns, the method comprising..." is composed of the same structural elements of previously rejected claim 1.

Claim 17 is met as previously discussed with respect to claim 1.

As to claims 18-20, Herz further tracks video content, programs, advertisements, etc., delivery to STMT (col. 23, lines 10-18, col. 29, lines 31-50, col. 41, lines 20-25 and col. 47, line 53-col. 48, line 4)

Claim 21 is met as previously discussed with respect to claim 1

As to claim 22, the claimed "a network termination unit, comprising..." is composed of the same structural elements of previously rejected claim 1.

Claim 23 is met as previously discussed with respect to claim 1.

Claim 24 is met as previously discussed with respect to claim 3.

Claim 25 is met as previously discussed with respect to claim 1.

As to claim 26, the claimed "a content analyzer, comprising..." is composed of the same structural elements of previously rejected claim 1.

Claim 27 is met as previously discussed with respect to claim 10.

Claim 28 is met as previously discussed with respect to claim 11.

Claim 29 is met as previously discussed with respect to claim 1.

As to claims 30-31, the claimed "an article containing machine-readable code... comprising..." is composed of the same structural elements of previously rejected claim 1.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6, 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Herz et al (5,758,257)** as applied to claims 1, 10 and 15 above, and in view of **Zintel (6,779,004)**.

As to claims 6, 12 and 16, Herz fails to explicitly teach where the use pattern packets are identified as such using a content discovery protocol.

However, note the **Zintel** reference disclose dynamic connectivity among distributed devices and services, where packets are identified using discovery protocol (col. 4, lines 56-65, col. 5, lines 49-56, col. 7, lines 17-26 and col. 46, line 33-46).

Therefore it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Zintel into the system of Herz in order to enable the client or the service provider to automatically find controlled devices and services.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Del Sesto et al (6,530,082) disclose configurable monitoring of program viewership and usage of interactive applications.

Riggins (6,195,090) discloses interactive sporting-event monitoring system.

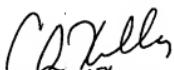
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q. Shang** whose telephone number is **571-272-7355**. The examiner can normally be reached on **700am-400pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Christopher S. Kelley** can be reached on **571-272-7331**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC) at 866-217-9197 (toll-free)**.



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